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Health Insurance Association of America

RESEARCH BULLETIN

The Cost of Maternity Care and Childbirth in the United States, 1989

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A.F. Minor
Health Insurance Association of America

December 1989

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Executive Summary

Since the 1986 Health Insurance Association of America (HIAA) survey, the costs of maternity care and childbirth have increased at a rate commensurate with the costs of other medical care. This research bulletin discusses reasons for those increases, and reports on findings of a 1989 HIAA survey of 173 community hospitals, 70 childbirth centers and 153 licensed midwives.

Highlights of the survey include:

- The cost in the United States for a normal pregnancy and delivery averages $4,334.
- The average national hospital cost for a normal delivery (excluding physicians' and other practitioners' fees) is $2,842.
- Physicians' fees for a normal pregnancy and delivery average $1,492.
- The average cost of a midwife's services is $994.
- Cesarean section costs an average of $7,186: $5,133 for hospital charges, and $2,053 for physicians' fees.
- A normal delivery based on a one-day stay in a birth center costs $2,111; a one-day stay in a hospital costs $3,233.
- Amniocentesis is the most frequently performed diagnostic procedure on pregnant women.
- Five of the commercial health insurers that write the largest volume of group coverage in the United States paid out $1.4 billion in maternity care claims.

Several factors contribute to the increasing cost of maternity care: the overall increase in the cost of health care; new technology such as neonatal intensive care units; a hostile malpractice environment resulting in an increasing number of diagnostic tests; and the increasing annual loss in revenue by community hospitals for uncompensated care.

The Cost of Maternity Care and Childbirth in the United States, 1989

Pregnancy and childbirth is generally thought of as a joyous event, but because the cost of having a baby is escalating at about the same rate as other health care costs, the happiness of bringing a new life into the world may be somewhat mitigated when the bill for maternity and neonatal care arrives.

Every few years, HIAA conducts a survey to determine the cost of maternity and newborn care, which includes prenatal care, hospitalization and other medical expenses for mother and infant. The survey also includes a discussion of a number of related issues, such as factors that contribute to cost increase.

According to the *1989 Advance Report of Final Natality Statistics*, published by the National Center for Health Statistics (NCHS), there were 3,809,394 births in 1987, the last year for which such data were available, and which is a 1 percent increase over 1986. Provisional data for 1988 indicate 3,913,000 births, a 2.7 percent increase over 1987. The 135,000 births included in this survey represent 3.5 percent of the United States total.

Most births (99.1 percent, according to the NCHS 1989 Advance Report) take place in a community or specialty hospital. According to the HIAA survey, metropolitan hospitals average 1,740 normal deliveries a year, and nonmetropolitan hospitals average 444 births a year. Larger hospitals have 115 premature deliveries each year, and smaller ones report an average of 16.

The current survey was conducted in early 1989 by polling 600 community hospitals in the United States. Usable data were received from 173 hospitals.[*]

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[*] The data reporting method used here is unlike that used in the past. Therefore, they cannot be compared with those of previous years. Hospital data are weighted averages; that is, before calculating averages for the United States as a whole or for any geographical area, cost information for each hospital is weighted in terms of proportion of total births. Thus, in determining average cost, the cost of each birth counts equally. In previous years, average cost data were not weighted according to the number of births, so that each hospital's costs (regardless of the number of births) were counted equally.

Data on physicians' fees are taken from HIAA's Surgical Prevailing Healthcare Charges System for the period March 1988 through February 1989. Data from the National Association of Childbearing Centers (NACC), which surveyed 70 birth centers, and the Midwives Alliance of North America (MANA), which surveyed 153 licensed midwives across the country, are also included.

Data are reported and tabulated for metropolitan and nonmetropolitan areas according to four geographical regions in the United States: Northeast, South, Midwest and West.

The Cost of Birth and Delivery

The major results of the 1989 survey are summarized in Tables 1 and 2. Costs differ from region to region and between metropolitan and nonmetroplitan areas. These data are based on an average two-day stay for a normal delivery and a four-day stay for a cesarean section.

The expense associated with pregnancy and childbirth has risen over the years along with other medical costs. According to the Consumer Price Index, between July 1988 and July 1989, the cost of medical care items and physicians' fees increased by 7.5 percent and 7 percent respectively. The cost of prescription drugs increased by 8.7 percent. Hospital semiprivate room rates have increased 14 percent since 1986.

The cost of a normal delivery in 1989 was $4,564 in metropolitan hospitals and $4,128 in nonmetropolitan ones. Cesarean deliveries in metropolitan hospitals averaged 13 percent more ($7,633) than cesareans in nonmetropolitan hospitals ($6,736).

Maternity care in a hospital with a physician in attendance is more costly in the northeastern region of the United States. A normal delivery is least expensive in the Midwest, where it costs $4,149, compared to $4,456 in the Northeast.

In 1987, 953,000 babies were delivered by cesarean section, which has become the second most frequently performed surgical procedure in the country, after biopsy. Figure 1 shows the increase in cesarean deliveries since 1980.

A cesarean delivery adds an average of 66 percent to the cost of having a baby because of the longer hospital stay and because of the surgeon's fee, which averages $2,053 nationwide. A cesarean costs $6,741 in the Midwest and $7,879 in the Northeast. The average cost of a four-day stay in the hospital is $7,186.

Table 1

Cost of Maternity Care in the United States and by Census Region, 1989 (Weighted Average Physicians' Fees and Hospital Charges)

	Normal Delivery			Cesarean		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro
Total U.S.	$4,334	$4,564	$4,128	$7,186	$7,633	$6,736
Hospital charges	2 ,842	2,925	2,749	5,133	5,288	4,916
Physicians' fees	1,492	1,639	1,379	2,053	2,345	1,820
Northeast						
Total	4,456	NA	NA	7,879	NA	NA
Hospital charges	2,964	NA	NA	5,826	NA	NA
Physicians' fees	1,492	NA	NA	2,053	NA	NA
South						
Total	4,204	NA	NA	7,087	NA	NA
Hospital charges	2,712	NA	NA	5,034	NA	NA
Physicians' fees	1,492	NA	NA	2,053	NA	NA
Midwest						
Total	4,149	NA	NA	6,741	NA	NA
Hospital charges	2,657	NA	NA	4,688	NA	NA
Physicians' fees	1,492	NA	NA	2,053	NA	NA
West						
Total	4,237	NA	NA	7,586	NA	NA
Hospital charges	2,745	NA	NA	5,533	NA	NA
Physicians' fees	1,492	NA	NA	2,053	NA	NA

Source: 1989 HIAA Survey and 1989 HIAA Surgical Prevailing Healthcare Charges System.

◆ Nonhospital birth options

Birth centers, popular with women who prefer a low technology environment, are most often free-standing facilities other than hospitals or physicians' offices. They provide an alternative setting for low-risk labor

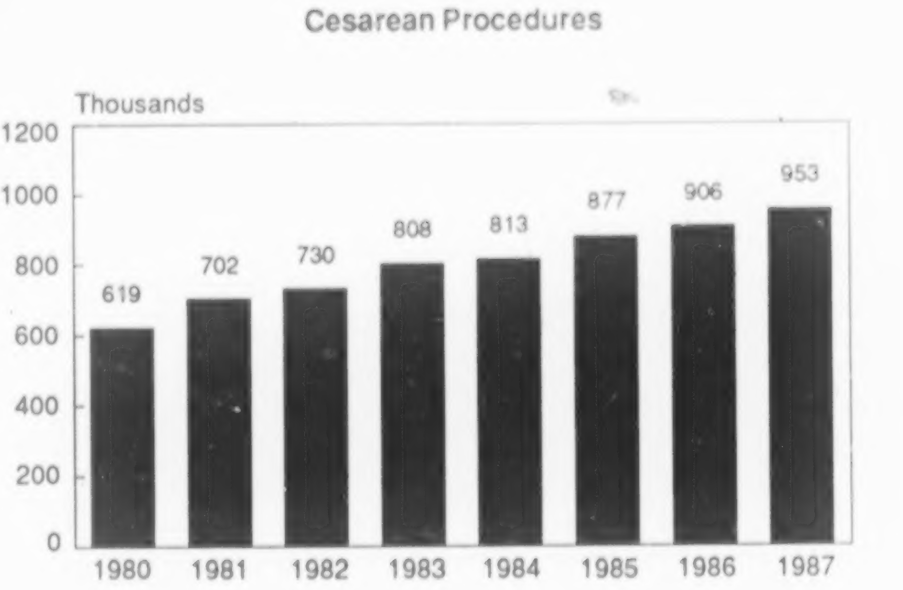
Table 2
Specific Hospital Charges for Maternity Care by Region, 1989
(Weighted Averages)

	Normal Delivery	Cesarean
Northeast		
Total	$ 2,964	$ 5,826
Room and Board	988	1,891
Labor room	413	*
Delivery room	*	874
Nursery	680	1,395
Anesthetic	148	257
Other ancillary	735	1,409
South		
Total	$ 2,712	$ 5,034
Room and Board	518	1,110
Labor room	224	*
Delivery room	*	754
Nursery	747	795
Anesthetic	131	360
Other ancillary	1,092	2,015
Midwest		
Total	$ 2,657	$ 4,688
Room and Board	650	1,400
Labor room	365	*
Delivery room	501	859
Nursery	467	874
Anesthetic	96	235
Other ancillary	578	1,320
West		
Total	$ 2,745	$ 5,533
Room and Board	712	1,839
Labor room	460	*
Delivery room	561	1,091
Nursery	459	1,105
Anesthetic	59	240
Other ancillary	494	1,258

Source: 1989 HIAA Survey

Note: Other ancillary includes laboratory, central supply, pharmacy and other miscellaneous charges. Northeastern region does not include Connecticut hospitals.

* Number of responses insufficient



Source: American College of Surgeons, Socio-Economic Factbook for Surgery, 1989.

Figure 1

and neonatal care, and cost considerably less than a hospital. Deliveries are attended by either a physician or a nurse-midwife and postpartum stays are usually limited to one day. However, less than 0.5 percent of all deliveries in the United States take place in birth centers. As Table 3 illustrates, birth centers provide care at lower costs than hospitals.

Physicians, either general practitioners or obstetricians-gynecologists, attended 96.3 percent of all deliveries. Midwives delivered 113,890 babies, 98,725 in hospitals by certified nurse midwives and 15,165 by other midwives at other locations, including birth centers and at home.

A certified nurse midwife is a registered nurse with advanced training in midwifery and certification by the American College of Nurse Midwives; a licensed midwife is a trained layperson, licensed by the state.

Both physicians and other practitioners fees vary according to region and are illustrated by Tables 4 and 5.

Table 3
Birth Center Charges
in the United States, 1989
(Includes Practitioners' Fees)

	Northeast	Midwest	South	West	Total US
Birth Center (1- day stay)	$ 2,390	$ 2,098	$ 1,902	$ 2,209	$ 2,111
Hospital (1- day stay)	$ 3,230	$ 2,880	$ 3,556	$ 3,148	$ 3,233

Source: National Association of Childbearing Centers, 1989.

Note: The birth center charges include laboratory tests, childbirth education, home visits and prenatal and postnatal visits. Data are unweighted averages.

◆ Factors contributing to increased cost of childbearing

The rising cost of maternity care is influenced by the cost-of-living index, as well as the following factors:

- The cost of medical malpractice insurance has increased because of physician's perceptions of the need to practice defensive medicine. As Figure 2 demonstrates, premiums approached $40,000 per year in 1987, an increase of 238 percent over the five-year period, 1982 to 1985. Most obstetricians-gynecologists (82.9 percent) say that the cost of malpractice insurance has directly affected their professional fees. The professional liability problem compromises the therapeutic value of the relationship between providers and patients, often alters the type of care given and adds to the costs of obstetrical care.
- Cesarean deliveries have increased from 17 percent of the total births in 1980 to 25 percent in 1987.
- There has been a change in maternal age. Both young teenagers and women who are in their later childbearing years are at greater risk of having a complicated delivery, which increases cost. Women in these two age groups account for an increased proportion of total births each year. There were 22,000 more

Table 4

Physicians' Fees in the United States, Weighted Averages, 1989

	Normal delivery		Cesarean delivery	
	Metro	Nonmetro	Metro	Nonmetro
Total US	$ 1,639	$ 1,379	$ 2,345	$ 1,820
Northeast	2,514	1,705	3,120	1,744
South	1,485	1,397	1,994	1,759
Midwest	1,217	1,111	1,759	2,148
West	1,595	1,425	2,055	1,405
(All Areas)	$ 1,492		$ 2,053	

Source: HIAA Surgical Prevailing Healt[illegible]are Charges System.

births to women between the ages of 35 and 49, and 542 more babies born to teenage mothers in 1987 than in 1986.

- Table 6 shows that hospitals have experienced increased economic pressure represented by the millions of dollars of lost revenue due to provision of uncompensated care, which,

Table 5

Midwives' Fees

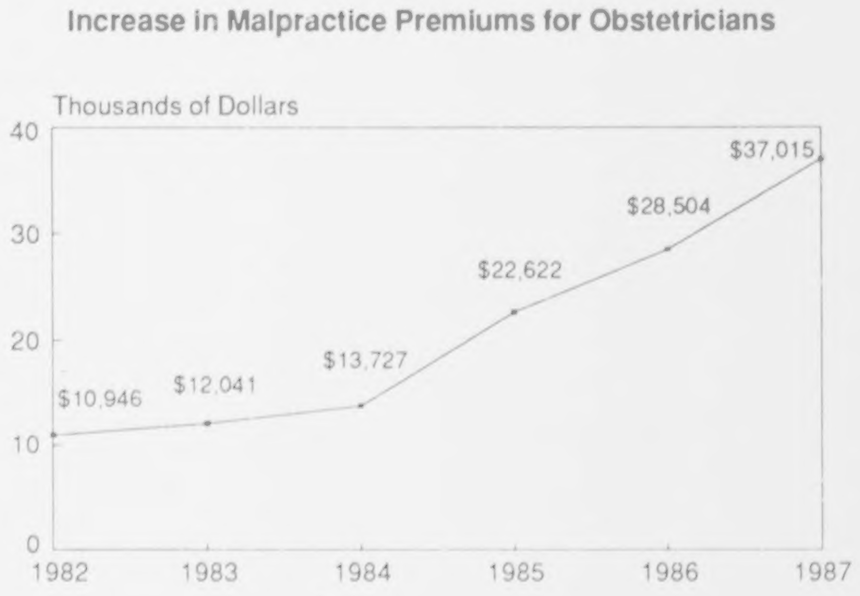
Members of the Midwives Association of North America, 1989

Normal Delivery

	Total	Metro	Nonmetro
Total US	$994	$ 1,060	$915
Northeast	1,070	1,161	985
South	847	883	811
Midwest	875	934	813
West	1,122	1,185	1,021

Source: Survey conducted at request of HIAA by the Midwives Alliance of North America (MANA).

Note: Data include prenatal care, testing, Lamaze classes, supplies and medications. Data are unweighted averages.


Increase in Malpractice Premiums for Obstetricians

Source: American College of Obstetricians and Gynecologists

Figure 2

according to the American Hospital Association, has risen by 103 percent from 1982 to 1987. Maternity care comprises 40 percent of all patients in the self-pay and no payment categories. These losses are reflected in higher costs for other hospital patients.

- Advanced technology for the care of premature and sick babies, many of whom are born addicted to drugs, is especially noticeable in neonatal intensive care unites (NICU), which are a financial drain on hospitals and generate a large proportion of the uncompensated care. The average daily cost of an NICU is $985, and a 30-day stay can cost $30,000 or more.
- The number of prenatal diagnostic tests has increased. The most common are: amniocentesis to detect chromosomal abnormalities; internal or external electronic fetal monitoring to determine fetal heart rate during labor, and fetal oxytocin stress test to evaluate a high-risk fetus by recording fetal heart rate during contractions, using a synthetic form of the hormone oxytocin as a stimulant.

Table 6
Uncompensated Care to Hospitals
(In billions)

	Total	Maternity	Percent of Total
1982	$ 6.2	$ 2.4	39
1984	9.5	3.9	41
1986	11.6	4.6	40
1987	12.6	5.0	40

Source: American Hospital Association

Diagnostic tests are used more frequently than they were 10 years ago. For example, the number of fetal monitoring tests increased from 114,000 in 1983 to 647,000 in 1987. There are several reasons for this increase: older women tend to have more complications; physicians want to avoid complications; and women want to take advantage of the ability to detect certain genetic abnormalities, as well as the sex of their fetus (the latter of which is considered medically unnecessary). See Table 7 for the cost of diagnostic tests.

Payment and Reimbursement

The federal Pregnancy Discrimination Act of 1978 mandates maternity care insurance. It was a positive step for most women (41 million women, age 15 to 44, are covered by private health plans and 38 million by employment-related plans), but it failed to close certain loopholes in group health insurance policies. Only employment-related group policies fall into this category; therefore many pregnant women, especially adolescent daughters of employees, are excluded because the policy applies only to an employee and spouse. The law also states than an employer does not have to provide group insurance if the firm employs fewer than 15 people or if it is self-funded, although since 1978, many insurance companies have voluntarily added maternity coverage to their small group policies. In fact, according to the 1986 HIAA survey, 95 per cent of new group policies cover maternity care.

Most group policies cover deliveries by midwives as well as physicians and deliveries in other than traditional hospitals. In 1988, five of the commercial insurance companies that write the largest volume of group

Table 7

Cost of Tests Frequently Performed on Pregnant Women, 1989

City	Amniocentesis	Oxytocin Stress	Fetal Monitoring
New York	$ 273	$ 114	$ 103
Chicago	185	149	107
Washington	269	155	75
Los Angeles	207	100	141
Denver	124	60	133
Houston	185	69	132
Miami	250	NA	133
Philadelphia	213	149	94
Boston	200	72	96
New Orleans	166	86	NA
Total US	170	81	65

Source: HIAA Surgical Prevailing Healthcare Charges System

coverage paid $1.4 billion for maternity care, including complications, which represents 10 percent of commercially insured maternity care in the United States. About 64 percent of American women (2.3 million) have their maternity care paid, at least in part, by private insurers. Seventeen percent of women (almost 10 million) have neither public nor private health insurance, and 333,000 women have private insurance policies that do not provide maternity coverage. These women pay for their own care or apply for Medicaid.

Medicaid-subsidized maternity care cost the nation $1.2 billion in 1985, and of the 542,000 women whose delivery was paid for by Medicaid, 6 percent of their infants required nenonatal intensive care.

Despite the best efforts of insurance companies to provide maternity coverage, problems remain. Single, widowed or separated women are more likely to be uninsured than married women, as are women who work part time or who work in service or retail operations where insurance protection is unavailable or inadequate.

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RESEARCH BULLETIN

Canadian Health Care: The Implications of Public Health Insurance

Edward Neuschler
Health Insurance Association of America

June 1990

Preface

The popular press has written much about the Canadian health insurance system for more than a year. The heightened interest is driven by America's twin problems of uncontrolled cost escalation and lack of health care coverage for millions of citizens. Superficially, to those looking for a simple solution, "Canada" may seem to be the answer.

On closer inspection, it becomes clear that Canada has not tamed the demon of health care cost inflation, and its promise of universal access has been compromised by supply constraints, at least for new and expensive medical technologies.

This should not be a surprise. There is no simple solution that magically can solve U.S. health care woes overnight. Societies choose different approaches to how they organize and finance health care, based largely on cultural history and societal value structure; but the underlying forces driving health care costs remain regardless of the structure chosen.

This country needs a pragmatic American solution to cost and coverage problems. Ineffective and unnecessary care must be eliminated while at the same time patients are assured prompt access to high-quality care and the best technology available when it is needed. Private managed-care plans are the best hope for achieving this difficult result. Assuring health care coverage for all Americans is primarily an issue of deciding who will bear the cost. The mechanisms are available, and the Health Insurance Association of America has made specific proposals to expand coverage while maintaining the many benefits of our existing employer-based private financing system.

This *Research Bulletin*, I believe, will contribute greatly to American understanding of how the Canadian health insurance system operates, with its strengths and its weaknesses. Its thorough research and objective presentation epitomize the high analytic standards the Health Insurance Association of America seeks in all research efforts.

Carl J. Schramm
President

Table of Contents

Page

Preface iii

Acknowledgments ix

Executive Summary 1

Introduction 7

Chapter 1: Health Care Financing in Canada 9

Chapter 2: Delivery System and Utilization 17

  Hospitals 17
  Physicians 20
  Practice Arrangements and Alternative Delivery Systems . . .22
  Physician Extenders .25
  Recent Developments .26

Chapter 3: Provider Payments in Canada 27

  Hospitals 27
  Physicians 29
  Expenditure Caps/Targets 33
  Physician Supply Constraints 35

Chapter 4: How Well is Canada Doing? 37

  Health Care Cost Containment 37
  Access 47

Chapter 5: U.S. Financing and Fiscal Impact 55

  Overall Public Sector Comparison 55
  The Role of State and Provincial Governments 59
  Estimating the U.S. Cost 60
  Estimating the Required Tax Increase 65

Chapter 6: The Wider Social Context 67

  Public Attitudes toward Government 67
  Form of Government .67
  Roles of Different Levels of Government 68
  Freedom of Choice 69
  The Role of Innovation 70
  The Benefits of a Free-Market Neighbor 70
  Conclusion 71

Table of Contents *(cont'd)* Page

Notes and References 73
Appendix 1: Canadian Media Reports on Access Issues 93
Appendix 2: Data and Sources 97

List of Tables, Figures and Exhibits Page

Table 2.1: Comparison of Hospital Resources and Utilization, 1986 19

Table 2.2: Comparison of Growth in Physician Supply 21

Table 2.3: Selected Specialists as a Percentage of the Total Physician Population, 1986 23

Table 2.4: Alternative Delivery Systems in Canada by Province, 1986 24

Table 3.1: Comparative Availability of Selected Medical Technologies .29

Table 3.2: Physician Fees (in U.S. Dollars) for Various Procedures, United States (Medicare) and Ontario, 1986 31

Figure 4.1: Total Health Care Spending Per Capita (Nominal Dollars) 38

Figure 4.2: Total Health Care Spending Per Capita (Constant Dollars) 39

Figure 4.3: Cumulative Increase Since 1967 in Real Health Care Spending Per Capita 40

Figure 4.4: Real Health Care Spending Per Capita: 5-Year Average Annual Growth Rates 41

Figure 4.5: Annual Percent Growth in Real Health Spending Per Capita 42

Figure 4.6: Canadian Health Care Spending Per Capita as a Percent of U.S. Spending Per Capita 43

Table 4.1: Annual Growth Rates Of Health Care Spending, 1960-1987 44

Figure 4.7: Total National Health Expenditures as a Percent of Gross National Product 45

Figure 4.8: Annual Growth in Real GNP Per Capita 46

Exhibit 4.1: Health Care Headlines in the Canadian Press . . .48

List of Tables, Figures and Exhibits *(cont'd)* Page

Table 5.1: Relative Size of the Public Sector, 1987 56

Table 5.2: Relative Burden of Various Taxes, 1987 57

Table 5.3: Percent Share of Total Public Sector by Federal, State/Provincial and Local Governments, Various Measures, 1987 60

Table 5.4: Comparison of Nonfederal Government Spending, 1987 61

Table 5.5: Nonfederal Government Health Spending, 1987 . . 62

Table 5.6: Estimated Increase to Implement Universal Public Health Insurance, Compared to Current Government Revenue and Outlays, United States, 1988 65

Acknowledgments

This *Research Bulletin* would not have been possible without the kind cooperation and assistance of a number of individuals, many of them Canadian.

The Health Information Division of Health and Welfare Canada graciously responded to several requests for up-to-date estimates of Canadian national health expenditures and made the latest figures available to us prior to their formal publication (expected later this year). Special thanks are due to Ms. Mary Paquette, who handled these requests with unfailing cheerfulness, and to Mr. L.W. Rehmer, Division Director, who spent time discussing various aspects of Canadian health insurance with us and shared information on physician payments and utilization. Mr. Rehmer also reviewed and made numerous useful comments on a draft of this Research Bulletin.

Our understanding of the Canadian health insurance system generally, and the most recent adjustments in the federal-provincial fiscal arrangements for financing it, was enhanced by conversations with Dr. J. Bruce Davis, Director of Program Administration for the Health Insurance Directorate, Health and Welfare Canada. Dr. Davis also reviewed and provided useful comments on an earlier manuscript.

We appreciate their willingness to review a draft of this *Research Bulletin.* Their assistance in supplying basic information and correcting factual inaccuracies in no way suggests or implies that they concur with this analysis or its conclusions.

Conversations with Professor Catherine Fooks of the Centre for Health Economics and Policy Analysis, McMaster University, aided our understanding of Canadian community health centers and Ontario's health services organizations; and Professor Peter Coyte of the University of Toronto's Department of Health Administration enlightened us on extended health care services. The Librarian of the Canadian Embassy in Washington was most helpful in locating useful reports, and the Canadian Tax Foundation also provided assistance. Mr. Charles Black of the Canadian Life and Health Insurance Association provided information on private

health insurance coverage in Canada, and several of HIAA's member companies also supplied relevant information and contacts. Special thanks in this regard to Renate M. Nellich, senior vice president at The Mercantile and General Reinsurance Company in Toronto, and to Ken L. Evason, a Canadian who is chairman and chief executive officer of Association Life Insurance Co., Inc., and a member of HIAA's Board of Directors.

Earlier in our research process, we received valuable orientation to the Canadian system and guidance in locating Canadian sources of information from Ms. Sherril B. Gelmon, a Canadian citizen who currently directs academic affairs for the Association of University Programs in Health Administration, and from Professor Thomas Rice of the University of North Carolina's School of Public Health, an American who has studied Canadian methods of physician reimbursement in detail. Both Ms. Gelmon and Dr. Rice also reviewed an earlier draft and provided useful comments.

Closer to home, staff of the Health Care Financing Administration's Office of National Cost Estimates provided the most recent revision of the U.S. national health expenditure series, and Dr. George Schieber, head of HCFA's Office of Research and a recognized authority on international health spending comparisons, kindly agreed to review an earlier draft.

The Bulletin's style was improved greatly by the editorial assistance of Felicity Skidmore and Marsha Preble.

Finally, I am indebted to Clare Lippert, a colleague in HIAA's Policy Development and Research Department, who helped gather and organize basic information and data on the Canadian health insurance system.

Every effort has been made to assure the accuracy of the information and analysis presented in this Bulletin. Any remaining errors of fact or interpretation are solely the responsibility of the author.

Edward Neuschler

Executive Summary

A firestorm of interest in Canada's national health insurance entitlement program has been stimulated by U.S. policy concerns about health care cost escalation and the plight of Americans who lack health care coverage, combined with claims that the Canadian system provides better coverage at lower cost. This study will contribute to the health care policy debate by describing the Canadian system, examining Canada's cost-containment and access record and assessing the fiscal implications for federal and state governments if a public health insurance entitlement were devised in the United States.

◆ The Canadian System

Since 1971, the 10 Canadian provinces have operated public health insurance plans that cover hospital and physician care for all residents of the province, plus some additional services depending on the province. Private insurance for government-covered services effectively is prohibited. There are no exclusions or dollar limits on medically necessary care and there is no cost to the patient at point of service, although two provinces charge small premiums. (These premiums represent only a minor portion of expenses, and care cannot be denied for failure to pay the premium.) Financing is provided largely from general revenue, with the Canadian federal government contributing a declining percentage (currently about 38 percent) of provincial health expenditures as a capitation grant. Growth in the federal contribution is linked to the growth rate of the overall economy, but continuing budget deficits have led the federal government to restrict the growth of its contribution in recent years. The latest federal budget freezes the federal contribution for the next two fiscal years (April 1990 to March 1992) at the fiscal 1989-90 per capita rate. The provinces are at risk for any cost increases.

Patients have free choice of doctor and hospital. Physicians are paid on a fee-for-service basis and must accept the provincial plan's payment as payment in full; no balance-billing of patients is permitted (a result of the 1984 Canada Health Act). Fee schedules are negotiated periodically between each provincial health plan and the provincial medical association, an increasingly contentious process. There are no government-imposed prior authorization requirements or utilization review process.

Individual hospitals negotiate their budgets with the provincial plan on a total budget basis (not per patient). In most provinces, there is no allowance for depreciation; capital improvements must be approved separately and are often funded by combinations of philanthropic, municipal and provincial monies. In those cases where capital improvements are funded by private philanthropy, the associated operating costs are still part of the total budget and must be approved by the province.

Canada's bed-to-population ratio is considerably higher than America's, as are overall hospital use and average length of stay. The physician-to-population ratio (210 per 100,000) is essentially the same as in the United States (212 per 100,000), although a significantly higher proportion of U.S. physicians are specialists. Unlike in the United States, there is very little physician ownership of major pieces of medical equipment, and all major surgery or high-technology diagnostic tests are done in hospitals. A few entrepreneurial physicians have opened private ambulatory surgery centers, largely for cataract surgery, that operate outside the public insurance system.

Although budgeted community health centers and limited capitation arrangements do exist in some places, alternative delivery systems which accept full financial risk for all the health care needs of their members, such as American health maintenance organizations (HMOs), do not yet exist in Canada.

◆ Canada's Cost-Containment and Access Record

Canada has not been as effective in controlling rising health care costs as the frequently reported percent-of-GNP comparison suggests. Analyzing health care costs over the past ten years (1977 to 1987), we found that real[1] per capita health care spending grew slightly faster in Canada than here. The average annual increase was 4.28 percent in Canada, compared to 3.93 percent in the United States. The fact that Canada now spends a smaller portion of total economic output on health care than the United States results not from more effective control of health care spending, but from faster economic growth in Canada over the past 20 years, particularly between 1967 and 1976.

While government wrestles with the burgeoning cost, public health insurance remains Canada's most popular social program; politicians fear to attack it or suggest any reduction in benefits. Over the years, Canadians have come to view their health care system as the best in the world, and the average Canadian probably still holds that view. Cracks have begun to appear in the system, however. Reports of long waiting lists for surgeries such as coronary bypass, hip replacement and cataract removal have become common in Canadian newspapers, as have reports of hospitals closing beds temporarily in order to conserve funds. (Acknowledging that waiting lists for heart surgery are too long, at least two provinces have agreed to pay for Canadians to have the surgery performed at U.S. hospitals.) As in the United States, emergency rooms in some major urban centers are overflowing, while patients wait on gurneys in hallways for beds to become available. Doctors express increasing concern that the quality of care is eroding due to ever more restrictive budgets. Government's concern, on the other hand, focuses on ways to constrain health care costs, which now consume on average one-third of total provincial expenditures. (In the United States, Medicaid and other government health programs now consume about 15 percent of state budgets.)

◆ Estimated Cost of Public Health Insurance in the United States

Canadians are more supportive generally of government-run social programs than are Americans. Excluding defense, Canadian governments (all levels combined) spend 18 percent more per capita than governments in the United States (all levels). Non-defense public sector expenditures represent a 30 percent larger share of total economic output in Canada than in the United States (36.7 percent of GNP in Canada, 28.3 percent of GNP here). The overall tax burden is also higher in Canada, although the magnitude of the difference is not as great, both because Canadian defense expenditures are lower than ours and because their combined government deficit is almost 50 percent higher (as a percent of GNP, 1987 figures).

Significant tax increases clearly would be needed to implement Canadian-style public health insurance in the United States. If implemented exactly as now structured in Canada, public health insurance in the United States would require an estimated $244 billion to $252 billion increase in public outlays (in 1991 dollars). Most of this amount would represent a shift from private to public financing, rather than entirely new spending. Thus, implementing universal government-provided health insurance would more than double current Medicare/Medicaid outlays (a 127 percent increase). If funded solely at the federal level, it would require a 59 percent increase in current FICA (Social Security and Medicare) payroll tax rates or a 46 percent increase in income tax receipts. If paid for solely at the state level, implementing such a system would require an increase in total state tax receipts on the order of 71 percent. In fact, if the fiscal burden of paying for health care were to be distributed exactly as it now is in Canada, almost the entire responsibility for new public funding would fall on the states. The U.S. federal government already pays for the same proportion of total health spending as does the Canadian federal government (29.2 percent in the United States and 29.6 percent in Canada in 1987).

◆ Wider Considerations

Cost and access considerations aside, other factors strongly suggest it would not be wise or practical to implement public health insurance on the Canadian model in the United States.

- First, Americans are much less tolerant of governmental control and more skeptical of its ability to operate programs effectively.
- Second, the Canadian parliamentary system at both the federal and provincial levels gives the party in power effective control over which policies will be adopted; the American system of checks and balances makes it much more difficult to effect such a sweeping policy change and adhere to it.

- Third, the provincial governments are freer from federal regulatory requirements than the U.S. states; federal oversight of state activities, combined with the larger average population of our states, would remove the real decision makers further from their health care consumers than is true in Canada.
- Fourth, Americans like choices; with a Canadian-type system, choice among different health plans effectively would be eliminated.
- Fifth, the United States now functions as a "safety valve" to relieve pressure on the Canadian health care system; if we adopted a Canadian-style system, no similar safety valve would be available for U.S. consumers.
- Finally, Americans like innovation and perceive their health care system as the most innovative in the world. Public health insurance, with its tightly administered budgets, discourages innovation and leads to irrational allocation of resources through arbitrary limits and rationing by queue. U.S. goals must be a sounder allocation of health care resources and an improved efficiency of medical practice through innovative approaches to managing care.

◆ Conclusion

Clearly, the United States must work to assure access to health care for all Americans. Equally clearly, we must do a better job of containing health care cost increases while maintaining quality of care. But public insurance fashioned on the Canadian model does not seem to be an approach that would work well here. Instead, there would be substantial advantages in reforming U.S. health care by building on the strengths of our existing employer-based private system. Chief among these is flexibility in developing innovative health financing structures that will meet society's demand for efficiently delivered, quality health care.

Introduction

Interest in Canada's government-operated health care financing system has spread throughout the U.S. health policy community. The firestorm is fueled by the continuing escalation of U.S. health care costs, by growing concern over the many millions of Americans who do not have health care coverage and by the observation — as publicized by Evans et al. in the March 2, 1989, issue of *The New England Journal of Medicine* — that the Canadian system affords universal coverage while consuming a smaller percentage of total economic output than the U.S. system.[1] A group calling itself "Physicians for a National Health Plan" has proposed a plan modeled on Canada,[2] and similar plans have been proposed by groups in several states (e.g., Michigan,[3] New York,[4] Ohio,[5] Washington[6]).

When described at the simplest level ("Government pays most of the cost of health care for everyone out of taxes, and sets all fees charged by doctors and hospitals; people can choose their own doctors and hospitals"), the Canadian system can stimulate a favorable public response. In a recent public opinion survey of Americans, Canadians and Britons, 61 percent of the Americans surveyed, when presented with this description, said they preferred the Canadian system.[7] A separate survey commissioned later by the Health Insurance Association of America (HIAA) found a smaller percentage of Americans (45 percent) preferred the Canadian system over the American when presented with the same description.[8] When asked why they liked the Canadian approach, these Americans said they were attracted by Canada's universal coverage, free choice of provider and government control of provider rates. But, upon further questioning, it became clear that other aspects of the Canadian system were less attractive to them. Even those who said they preferred the Canadian system felt strongly that waiting many months to obtain elective surgery, as now seems common in Canada, would be unacceptable. They also said they did not like Canada's prohibition against purchasing private insurance for benefits covered by the public plan, and were inclined to be less supportive if substantially higher taxes would be needed to fund the system.[9]

Insurers, policy makers and the general public all need a better understanding of the basics of the Canadian health care system and its potential implications for the United States. This report thus has three major purposes — to:

- Describe how the Canadian health care system operates, focusing primarily on its financing arrangements but including some basic information on the organization of health care delivery as well;
- Examine the contention that Canada has done a better job of controlling health care costs than the United States; and
- Explore the potential fiscal impact on the public sector in the United States if the Canadian model of health care financing were to be adopted here.

Chapter 1 provides a brief summary of the history and current structure of health care financing in Canada. Chapter 2 compares Canada's delivery system and utilization patterns with those of the United States. Chapter 3 reviews how Canada pays providers. Chapter 4 compares the health care cost-containment records of the United States and Canada and assesses current access patterns of the Canadian system. Chapter 5 compares the size of the public sector in the two countries and provides rough estimates of the costs of implementing a government-run health insurance entitlement program in the United States. Chapter 6 ends the report with a discussion of political and cultural factors that cast doubt on the feasibility and advisability of adopting public insurance on the Canadian model in this country.

Chapter 1

Health Care Financing in Canada

Government financing of hospital and physician care in Canada did not burst upon the scene, fully matured, in 1971. Rather, it developed gradually over a period of many years, beginning just after World War II.

The Canadian federal government's role in health care derives solely from its general power to tax and to spend. The Canadian Constitution assigns responsibility for health care to the provinces, which are considerably more powerful in the Canadian federal system than are the states in the U.S. federal system. Canada's provinces are jealous of their prerogatives and suspicious of federal attempts to encroach on them. But the provinces do not necessarily agree with one another. Some provincial parties and governments favor a broad government role, while others prefer private action and try to keep government's role as small as possible. In this political environment, gaining consensus on a national approach to an issue as contentious as health insurance was no easy task.

Proposals for federal subsidies to provincially administered health insurance programs were first presented to a committee of the Canadian House of Commons in 1943 and were discussed widely and endorsed over the next two years. But, at a special Dominion-Provincial Conference on Post-War Reconstruction in 1945, participants could not reach an agreement on a specific proposal put forward by the federal government. The wealthier provinces' governments felt that the proposal would have required them to cede too much revenue-raising authority to the federal government.[1]

Several provinces then decided to proceed with universal hospital insurance on their own. The prairie province of Saskatchewan moved first, in 1947, motivated in part by failure of the provincial hospital association to establish a hospital prepayment or insurance program (i.e., a "Blue Cross" plan), as other provincial associations had done. British Columbia followed in 1949 and Alberta in 1950.

The issue of a federally subsidized national program was raised again at a federal-provincial conference in 1955 and, two years later, the Hospital Insurance and Diagnostic Services Act was passed. That Act offered 50 percent federal funding[2] for provincial expenditures on medically necessary hospital care, defined as inpatient services, outpatient services, diagnostic services, chronic care, rehabilitative care and acute care. To receive federal funds, provincial plans had to provide comprehensive inpatient hospital ward services and assure universal coverage, portability of benefits and availability on equal terms and conditions to all residents. By 1961, universal government-run hospital insurance was in place in all provinces and territories.

In 1962, Saskatchewan again led the way by implementing government-run insurance for physicians' services, provoking an unsuccessful 23-day strike by physicians. Also in the early 1960s, the national Liberal Party, then in opposition, committed itself to enacting medical care insurance based on the hospital insurance model. The Progressive Conservative government, at the request of the Canadian Medical Association, appointed a Royal Commission to study the issue. The Commission report, issued in June 1964, surprised its progenitors by recommending universal, provincially administered medical insurance, to be subsidized by the federal government.

The Liberals returned to power in 1963, introduced a Medical Care Insurance program into Parliament in 1965, and enacted it in 1966. As with the hospital insurance program, it offered 50-50 federal matching[3] for provincial medical insurance programs meeting specified conditions: universality (defined as covering 95 percent of the population), comprehensive services, portability, public administration and reasonable access to insured services. Implementation was delayed to July 1, 1968, due to federal budget deficit concerns, and only Saskatchewan and British Columbia qualified on that date. But by January 1, 1971, all 10 provinces had established qualifying programs. (The two territories followed within a year.)

Problems with the system began to emerge after a few years. On the one hand, the federal government had lost control of its health budget because it was forced to match whatever the provinces spent. In the highly inflationary 1970s, this was a fearful prospect. On the other hand, the provinces were annoyed with detailed federal auditing of costs under the hospital insurance part of the program and disturbed that the availability of federal matching funds only for hospital and medical care was distorting provincial health services priorities.

These concerns led to a change in the federal-provincial financing arrangements in 1977. The Established Programs Financing Act abandoned the previous open-ended matching formulas and changed the federal contribution to an indexed per capita block grant approach.[4] The federal government's average per capita contribution in fiscal year 1975-76 was established as the base. This base was increased annually by the average nominal growth in GNP for the previous three years. The indexed per capita amount was then multiplied by the population of each province to determine the province's entitlement.[5] The per capita block grant approach remains in place today, but the annual escalator was reduced in 1986 and again in 1989 as part of a federal deficit reduction strategy.[6] As a result, the federal contribution declined from 44.5 percent of total provincial government health expenditures in 1979 to 38.6 percent in 1987.[7] Recently, the Canadian federal government decided to freeze its per capita contribution to the provinces at the fiscal 1989-90 level for the next two fiscal years[8] (1990-91 and 1991-92) as part of broad measures aimed at reducing the budget deficit. Thereafter, the annual escalator will be the average three-year nominal growth in GNP minus 3 percentage points.[9]

The 1977 Act also established the Extended Health Care Services (EHCS) Program to assist the provinces in providing less expensive support services, including nursing home intermediate care, adult residential care, home care and ambulatory health services. The federal contribution was set at $20 per capita in the base year (1977-78) and has been increased in the same manner as for the larger established programs.[10]

The most recent change in the legislative structure of the system came in 1984. A single, integrated piece of legislation, the Canada Health Act, replaced the separate laws that had authorized federal subsidies to provincial hospital and medical insurance plans and had established the original conditions under which federal funds were available.

Two primary motivations underlay this replacement. The first was to increase federal oversight. The 1977 Established Programs Financing Act effectively had eliminated any need for provincial hospital and medical insurance plans to meet federal requirements in order to receive federal funding. The resultant lack of federal oversight was felt to be inappropriate. As an all-party parliamentary task force concluded in 1981, despite the constitutional assignment of responsibility for health care to the provinces "there is an overriding national interest in the operation of health insurance plans and in the effectiveness of health care delivery," and "the proper role for the federal government is the formulation, monitoring and enforcement of conditions on its financial support of provincial programs."[11] The task force therefore recommended that the earlier laws "be consolidated in order to establish clear program conditions supported by explicit criteria against which satisfaction of those conditions could be monitored and [to implement] some withholding of federal financial support to provincial health plans that did not fully meet those conditions."[12]

The second motivation was to control the rapid increase in "extra billing"[13] and "opting out"[14] by physicians that began with the end of economywide price and income restrictions in 1978. The total amount billed to patients in excess of the established provincial fee schedules was estimated to be $100 million (in Canadian dollars)[15] in 1983. Extra billing became a major election issue in 1979 and 1980, and was condemned by a special Commission that conducted a Health Services Review in 1979 and 1980 and by the all-party Parliamentary task force previously mentioned. User fees imposed by the provincial health plans, primarily small per diem charges for inpatient care, were also condemned. Thus, the ideological basis on which the Canadian health insurance program was founded was reinforced: Extra billing and user charges were perceived as a barrier to care for some and were not to be permitted.

The Liberal government agreed with these conclusions and formally proposed the elimination of user fees and extra billing. After a heated public debate, the popularity of "free" care among the citizenry and the philosophical commitment to "no barriers to health care" prevailed over strong opposition from the medical association and the provinces themselves. The Act was passed unanimously in Parliament.

The resulting Canada Health Act forms the basis for the Canadian health care financing system as it operates today. It consolidated, amended and made more specific the five basic conditions for federal funding that had been in place under the previous statutes:[16]

- Universality — available to all residents of the province on uniform terms and conditions. For new residents, the waiting period prior to entitlement cannot exceed three months.
- Comprehensiveness — covering all medically necessary hospital and medical services (and surgical-dental services that can be provided properly only in hospitals). Services rendered by health care practitioners other than physicians (and dentists as noted) are covered at the discretion of the provincial plan.
- Portability — providing continued coverage for the duration of the (maximum three-month) waiting period to residents who relocate to another province and coverage for residents who are temporarily absent from the province. Prior approval may be required, however, for elective services provided out of the province.
- Accessibility — affording reasonable access without barriers (including out-of-pocket costs) and providing reasonable compensation to physicians.
- Public administration and accountability — run by a nonprofit, public authority accountable to the provincial government.

The 1984 Act did not prohibit extra billing and user charges directly. Instead, it provided for a reduction in the federal payment to each province exactly equal to the amount paid out-of-pocket by patients in that province, either as extra billing or as user charges. The reductions began immediately. Provinces were promised that, if they eliminated extra billing and user charges within three years (by March 31, 1987), all reductions previously made would be refunded to them. All provinces did so by the deadline. All user charges have now been eliminated,[17] and extra billing by physicians is now prohibited throughout Canada.

The only other major change from previous law was in the universality criterion. By raising the compliance standard from 95 percent to 100 percent of provincial residents, the new law made it impossible for the three provinces that then charged premiums to deny coverage for nonpayment of premium. (Only two provinces now charge premiums.)[18]

The five federal criteria now in place assure that, although there are still 12 separate provincial and territorial plans, they are largely similar in that (1) there is a single, government-operated provincial health plan that is the sole payer for hospital and physician care and (2) all residents are eligible, regardless of their employment status.

The major differences among provincial plans are the fee schedules used for physician payment and the additional services they cover. Additional services range from podiatry and physiotherapy services to dental services and prescription drugs. The provincial plan may limit the annual amount it will pay for such services. For example, plan reimbursement for physiotherapy services is limited to $200 annually in Alberta and $64 annually in New Brunswick, where only older people are eligible. Most provinces offer some sort of prescription drug benefit, at least for older people. Six provinces offer dental benefits for children under age 16, with one of these limiting the program to needy children.[19] Unlike the basic "insured services" (hospital and physician), user charges or copayments are permitted for added benefits. Annual plan liability limits also are permitted.

Private insurance to cover services available under the provincial health plan effectively is prohibited in all provinces.[20] Because the public plans do not cover necessary services such as prescription drugs for everyone, and may limit the amount of coverage for other services such as physical therapy, there is a residual role for private insurance. Most Canadian employers offer supplemental health insurance as an employee benefit. This insurance typically covers prescription drugs, dental and vision care, the additional charge for a private or semiprivate hospital room, medical devices, ambulances and other transportation, special nursing, medical expenses incurred outside Canada in excess of amounts covered by government plans and certain services beyond the limits of government plans (e.g., podiatry and chiropractic services).

This supplemental private insurance, largely employer-provided, is quite prevalent. In 1985, 65 percent of Canadians had some form of private insurance coverage.[21] In 1986, 60 percent of Ontario residents were covered by supplemental Blue Cross coverage.[22] According to one Canadian insurance company estimate, the majority of private insurance dollars go for prescription drugs (65 percent), with 15 percent going for vision care, 8 percent for semiprivate room charges and the remaining 12 percent for everything else.[23] Overall, about 26 percent of Canada's total health expenditures remain in the private sector,[24] although how much private spending is insured and how much is paid out of pocket cannot be determined.

Chapter 2

Delivery System and Utilization

The health care delivery system in Canada consists primarily of nonprofit community and teaching hospitals and self-employed, fee-for-service physicians. Physician practice arrangements other than fee-for-service appear to be less prevalent in Canada than in the United States, although budgeted community health centers and limited capitation arrangements do exist in some places. Alternative delivery systems which accept full financial risk for all the health care needs of their members, such as American HMOs, are virtually unknown in Canada. Physician ownership of major health care facilities or equipment has not been common. Clinics for various types of ambulatory surgery (e.g., cataract repair) recently have begun to spring up outside the public insurance system, but expensive technology such as magnetic resonance imaging (MRI) equipment has not diffused beyond the hospital walls.

This section compares the available health care resources in the United States and Canada and discusses some differences between the two delivery structures.

◆ Hospitals

Virtually all hospitals participate in the public insurance program and, therefore, their total annual budgets are determined in negotiation with the provincial health plan. These hospitals, all of which are nonprofit, are called public, a reference not to their ownership but to their funding. According to the 1988 edition of the Canadian Hospital Directory, of the 1,243 hospitals in Canada, 1,133 are public hospitals, whose sole source of revenue is the provincial health plans. These hospitals are owned by municipal or county corporations (29 percent), provincial authorities (14 percent), voluntary organizations (46 percent) and religious orders (11 percent).[1]

Less than 5 percent of all Canadian hospitals are private, which means they do not participate in the public insurance program (61 of the total 1,243 hospitals).[2] A few private hospitals provide acute care in the populous provinces of Ontario and Quebec, but the majority of them are for long-term care. These hospitals are operated for profit by their private owners, and their patients pay for services directly.

As can be seen in Table 2.1, Canada has almost 30 percent more hospital beds per 1,000 population than the United States (5.21 versus 4.05 in 1986), and those beds are more often full (81.5 percent occupancy in Canada versus 64.3 percent in the United States in 1986). Annual inpatient admission rates are only slightly higher in Canada, but average length of stay is dramatically longer (52 percent) there. The result is that total patient days per 1,000 population are 63 percent higher in Canada.

The relatively greater use of inpatient care in Canada apparently reflects at least two phenomena. First, the dramatic shift to outpatient diagnostic testing and outpatient surgery that has taken place in the United States has not been replicated yet in Canada. (There are a few exceptions. See "Recent Developments" on p.26) For example, all Canadian computerized tomography (CT) scanners are located in hospitals and, in Ontario, this has been made a legal requirement.[3] Keeping major medical procedures in hospitals, which are under their direct budgetary authority, allows provinces to better manage total costs by controlling supply.

Second, Canada appears to have a higher proportion of long-staying elderly patients in its hospitals. To some extent, this is a statistical artifact. Almost one-quarter (23 percent) of Canadian public hospital beds are set up for extended or chronic care use.[4] The long stays of these patients are reflected in the overall hospital statistics and cannot be disentangled from them. But the higher proportion of long-staying elderly patients also appears to reflect a general shortage of appropriate alternative arrangements. In Manitoba, for example, 5 percent of hospital patients aged 65 and older stay 60 days or more. In Ontario, the most populous province, the figure is about 2.9 percent. These figures compare with only 1 percent in the United States (0.2 percent if long-stay rehabilitation hospitals are excluded from the figures).[5] Because long-term patients use fewer resources per day (nursing attention, diagnostic work-ups and such) than an acute care patient, hospitals

Table 2.1
Comparison of Hospital Resources and Utilization, 1986

	Canada	United States	Percent Difference (Canada/U.S.)
Beds per 1,000 Population	5.21	4.05	+ 29 %
Occupancy (percent)	81.5 %	64.3 %	+ 27 %
Average Length of Stay (days)	10.8	7.1	+ 52 %
Patient Days per 1,000 Population	1,550	950	+ 63 %
Admissions per 1,000 Population	141	134	+ 5.2%
Total Population (millions)	25.4	241.6	

Definitions and Sources:

Canadian statistics are based on public general and pediatric hospitals and exclude "allied special" hospitals, federal hospitals and private hospitals. In Canada, a public hospital is defined as one which "is not operated for profit, accepts all patients regardless of their ability to pay, and is recognized as a public hospital by the province in which it is located." Most Canadian hospitals are "public" in this sense. "Allied special" hospitals are excluded here because their average length of stay is well in excess of 30 days. Figures given here were reported by hospitals for the April 1986 to March 1987 fiscal year.
Source: *Canadian Hospital Directory, 1988.*

U.S. statistics are based on "community hospitals," which are defined as "all non-federal short-term general and other special hospitals, excluding hospital units of institutions, whose facilities and services are available to the public." This definition excludes long-term hospitals, i.e., those in which the average length of stay is 30 days or more. Figures given here were reported by hospitals for their fiscal year which ended in 1986; the precise date varies by hospital.
Source: American Hospital Association, *Hospital Statistics* (1987 ed.)

Further, the U.S. statistics are for "staffed" beds, while Canada more often bases its statistics on "approved" beds. Using a common definition would have yielded less recent data. The ratio of staffed to approved beds in Canada is close to 1.0 and has shown no consistent trend up or down since 1976. The result of using approved beds is that the Canadian bed-to-population ratio will be slightly overstated and their occupancy rate will be slightly understated, compared to U.S. figures. For example, for fiscal year 1984-85, there were 5.18 approved beds and 5.09 staffed beds per 1,000 Canadians. Statistics on admissions, patient days and average length of stay are not affected by this small discrepancy.

with tight budgets have no incentive to make the extra effort required to find alternative placements for them. This phenomenon probably also explains the higher average occupancy rate of Canadian hospitals.

◆ Physicians

Despite the ban on extra billing, virtually all Canadian physicians participate in the provincial insurance systems. Nationwide, less than 1 percent of all active civilian physicians do not participate in the government-run insurance system.[6] If a patient goes to one of the few nonparticipating physicians, the transaction must be totally out of pocket; the provincial plan will make no reimbursement whatsoever. And, as noted in Chapter 1, private insurance reimbursement for such services is banned.

Overall physician supply per capita is about the same in Canada as in the United States: 210 civilian physicians per 100,000 Canadians versus 212 nonfederal physicians per 100,000 Americans in 1986.[7] Physician supply has been growing faster than the general population in both countries for the past couple of decades (see Table 2.2), although Canada restricted immigration of physicians after 1975. From 1975 to 1986, the number of active physicians per capita grew an average of 2.5 percent per year in the United States versus only 1.8 percent per year in Canada.

Although overall physician supply is very similar, the United States appears to have a much higher proportion of specialists than does Canada. Precise comparisons are difficult because of reporting differences between the countries, but the trend is clear nevertheless.[8] In Canada, 52 percent of physicians are certified as general practitioners (GPs) or family practitioners (FPs).[9] In the United States, only about 13 percent of physicians report that they spend the majority of their practice time on GP-FP tasks.[10] If pediatricians, internists and obstetrician/gynecologists are counted as nonspecialists, on the argument that many of these physicians in fact spend much of their time on primary care, 45 percent of U.S. physicians can be classified as primary care providers, compared to 67 percent of Canadian physicians. The

Table 2.2
Comparison of Growth in Physician Supply
Active Physicians per 100,000 Population

	Canada		*United States*			
Year	Civilian Physicians	Average Annual Growth Rate	Nonfederal Physicians	Average Annual Growth Rate	Total Physicians	Average Annual Growth Rate
1970	146		141		156	
		3.3 %		2.6 %		2.2%
1975	172		161		174	
		1.3 %		3.2 %		2.4%
1980	184		188		196	
		2.3 %		2.3 %		2.3%
1985	206		211		220	
		1.6 %		0.8 %[a]		0.8%[a]
1986	210		212		221	

a. The marked slowing in the growth of physician supply in the United States after 1985 may be a statistical artifact. The total number of physicians grew at the traditional rate between 1985 and 1986. But there was a 21 percent increase in the number of physicians reported to be inactive.

Definitions and Sources:

Canadian data report "active civilian physicians . . . defined as civilian physicians – whether or not registered, whether or not in private practice, whether or not involved in direct patient care – with a known address in Canada at the end of the year. Excluded are retired and semi-retired physicians, those reported as being abroad, those in the Armed Forces, or those with a (temporarily) unknown address in Canada." Data include interns and residents but exclude doctors of osteopathy, of which only 21 were active in Canada on December 31, 1986.

Sources: Health and Welfare Canada, *Health Personnel in Canada 1987* (Ottawa: Minister of Supply and Services Canada, 1988), Table 21.1, and Health and Welfare Canada, *Canada Health Manpower Inventory 1977* (Ottawa: Minister of Supply and Services Canada, 1978), Table 20.2.

U.S. data report active doctors of medicine and doctors of osteopathy in the United States and outlying areas. Physicians who could not be classified by activity status are included as active nonfederal. For consistency with the Canadian data, physicians with unknown addresses are excluded. Because of the difficulty of separating federal physicians into civilians and those in the Armed Forces, U.S. figures are shown both with ("Total") and without ("Nonfederal") active federal physicians. (The Canadian data exclude only physicians in the Armed Forces.)

Source: National Center for Health Statistics, *Health United States 1988*, Department of Health and Human Services Pub. No. (PHS) 89-1232 (Washington, D.C.: U.S. Government Printing Office,March 1989), Tables 82 and 83.

In both countries, "population" is the total population of the country including the Armed Forces, whether resident or overseas. For the United States, population includes the resident population of the outlying areas (Puerto Rico and four smaller island jurisdictions). Other published U.S. sources use resident population or civilian population, but Canadian figures were available only for total population.

proportion of physicians practicing in specialties that clearly do not engage in primary care to any great extent varies widely as well (see Table 2.3). General surgeons and orthopedic surgeons, for example, represent a significantly higher proportion of the U.S. physician population than of the Canadian physician population.

Rural areas remain underserved in both countries.

◆ Practice Arrangements and Alternative Delivery Systems

As in the United States, the Canadian medical paradigm is the entrepreneurial, self-employed, fee-for-service physician. In both countries, a large plurality of physicians are in solo practice. A 1984 Canadian study of five provinces found half of all physicians in solo practice (ranging from 43 percent in Quebec to 57 percent in Ontario).[11] The American Medical Association's Socioeconomic Monitoring System found that solo practitioners represented 43.3 percent of nonfederal patient care physicians in the United States in 1984, although the percentage had fallen to 38.5 percent by 1988.[12]

But while alternatives to traditional fee-for-service reimbursement have spread widely across the United States in recent years, fee-for-service has remained the dominant mode of payment in Canada. The only alternative arrangements available in Canada at this time are community health centers and a few capitated physician groups. None of these are at risk for the costs of inpatient care, as American HMOs are. Table 2.4 shows the distribution of these types of alternative arrangements across Canadian provinces in 1986, the latest year for which figures are available.

Quebec and Ontario are the only two provinces in which alternative systems seem to be represented in any numbers. Quebec has taken a much more aggressive role in assuring the availability of health and social services in local communities than have other provinces. Local Community Health Centers, providing one-portal entry to health and social services, have been part of a provincially planned regional network since 1970. Services that must be

Table 2.3
Selected Specialists as a Percentage of the Total Physician Population, 1986

	Canada	*United States*	
Specialty	**Certified**	**Total**	**Board-Certified**
General Surgery	3.9 %	6.9 %	3.6 %
Orthopedic Surgery	1.6 %	3.3 %	2.1 %
Plastic Surgery	0.58 %	0.77 %	0.49 %
Urological Surgery	0.89 %	1.7 %	1.2 %
Ophthalmology	1.7 %	2.8 %	2.0 %
Radiology (all types)	3.3 %	4.5 %	3.4 %

Definitions and Sources:

Canadian data report only physicians who have been properly certified as specialists by the appropriate organization. Canadian physicians cannot practice as specialists without such a certificate. Interns and residents are not included in the specialty physician counts but, for consistency with the U.S.data, are included in the total physician count.
Source: Health and Welfare Canada, *Health Personnel in Canada 1987* (Ottawa: Minister of Supply and Services Canada, 1988), Tables 21.1 and 21.11.

In the United States, licensed physicians may practice any specialty. The "Total" column is based on physicians' "self-designated practice specialty." Board certification is a voluntary process. The "Board-certified" column is based on physicians who are certified by the specialty board corresponding to their self-designated practice specialty. Interns and residents are included as active physicians and may appear in the specialty counts.
Source: G. Roback et al., *Physician Characteristics and Distribution in the U.S., 1987 Edition,* (Chicago: American Medical Association, 1988), Table B-12.

Total active physicians, the base for calculating the percentages shown, are defined as in Table 2.2. In particular, doctors of osteopathy are included as active physicians in the United States (i.e., added to the AMA figures) but are not assigned to any specialty.

available, composition of the governing board and relationships with other regional services are all prescribed by provincial statute. Consumer governance is emphasized. The centers also carry out traditional public health functions that would be the responsibility of governmental units in other provinces.[13]

Ontario has two types of alternative arrangements: health service organizations and community health centers. Health service organizations (HSOs) are capitated arrangements between groups of physicians and the provincial health plan. As in an American

Table 2.4
Alternative Delivery Systems in Canada by Province, 1986
(listed west to east)

British Columbia	10
Alberta	2
Saskatchewan	4
Manitoba	5
Ontario	30 +
Quebec	100 +
New Brunswick	11
Nova Scotia	1

Note: Alternative delivery systems include organizations such as community health centers funded under global budgets (known by a variety of names in different parts of Canada) and, in Ontario, health services organizations funded on a capitation basis. Source: Ralph W. Sutherland and M. Jane Fulton, *Health Care in Canada: A Description and Analysis of Canadian Health Services* (Ottawa: The Canadian Public Health Association, 1988), p.225.

HMO, the physician group in an HSO receives a monthly capitation payment for each patient on the roster, whether the patient actually receives care in that month or not. But there are no financial incentives for patients to use only HSO providers. Patients cannot be restricted to receiving care only from physicians in the HSO network, and if a patient receives care from a non-HSO provider, the HSO loses that month's capitation payment.[14] In addition, HSOs provide only medical care. Hospital care for HSO patients is paid for by the provincial government, just as it is for non-HSO patients. The HSO is not at risk for inpatient costs incurred by its patients, but HSO physicians do receive an incentive payment from the province if hospital utilization rates for their patients are lower than those for non-HSO patients in a given month. Hospital utilization is 16 percent lower for HSO patients than for non-HSO patients, but a study funded by the provincial health ministry found that HSO patients received no more preventive care than non-HSO patients.[15]

Ontario's Community Health Centers (CHCs) are designed to provide access for underserved groups. CHCs differ from HSOs in that, among other things, each CHC must have a board of directors made up of members of the community it serves, whereas HSOs are run by physicians. CHCs are initiated locally, when a group of people in a community are identified as having difficulty obtaining health care services for various reasons — language barriers or the socio-economic characteristics of their neighborhood, for example. The underserved group's case is presented to the provincial health ministry, which then decides whether the group could benefit from a CHC. A CHC is funded with a global budget; it is staffed by social workers and other non-medical providers, as well as physicians; and the CHC's Board determines what services are necessary to meet the underserved group's needs. Services may include literacy programs, nutrition/dietary counseling and day care, in addition to traditional health services.[16]

Further development of alternative arrangements may accelerate in the future as provincial governments seek solutions to the problem of health cost escalation. For example, Ontario has plans for a Comprehensive Health Organization (CHO). This will incorporate hospital care as well as physician care in a delivery system using a mixture of fee-for-service and capitated financing arrangements.[17]

◆ Physician Extenders

Data on the number and training of physicians' assistants, nurse practitioners and nurse midwives in Canada are unavailable. Canadian government health manpower studies do not include them, and educational programs often do not differentiate their graduates. For example, nurse practitioners and nurses may both be reported as "graduates of the school of nursing." The lack of data suggests that these professions may be less prevalent in Canada than in the United States. The system is certainly designed to limit their use. Almost all nonphysician health professionals in Canada are required to work under the supervision of a physician for any reimbursement by the provincial plans. Physicians are thus able to control the diffusion of these personnel. Since there is an oversupply of physicians, they seem unlikely to encourage the use of personnel that could substitute for them, except in very limited circumstances.

One such circumstance is service in unattractive locations, such as the extremely isolated communities of the far North. Another is service in alternative delivery systems, such as Ontario's HSOs, which also use nurse practitioners.[18] Despite physician opposition and the apparent lack of official attention, there does appear to be a growing demand for alternative providers. For example, in 1983 Alberta's and Ontario's Colleges of Physicians and Surgeons rejected home births as a delivery option, resulting in an increasing demand for midwives as substitutes for physicians who refuse to attend these births.[19]

◆ Recent Developments

In recent years, a few entrepreneurial physicians have opened private ambulatory-surgery clinics to capitalize on the long waits patients often experience when they seek certain kinds of elective surgery through the hospital-based public system. Cataract repair is the prime example, but there are others. When such care is provided outside the publicly funded hospitals, only the surgeon's fee will be paid by the provincial health plan. Any charge for use of the facility itself must be paid out of pocket by the patient. Despite charges in the $900 to $1,200 range for cataract repair, however, the private clinics have been busy.[20]

In addition, at least one provincial government is moving to bring ambulatory surgical facilities under the public insurance umbrella, making them available without charge to patients but also bringing them under provincial control.[21]

Chapter 3

Provider Payments in Canada

As the single payer for hospital and physician services, the provincial health plans appear to have much more direct control over their outlays than any health care purchaser, public or private, in the United States. But even in Canada, controlling the growth in the total volume of services rendered has proven difficult. The need to control volume appears to have become a higher priority for the provinces in recent years, as slower overall economic growth has limited government resources and the federal government has cut back on its contribution.

This section discusses how Canadian provinces pay hospitals and physicians.

◆ Hospitals

Hospitals account for an almost identical share of total health expenditures in both Canada and the United States: 39.2 percent in Canada and 39.6 percent in the United States (1987).[1] In the United States, hospitals earn revenue patient by patient, based on the actual services provided or the type of patient treated. In Canada, the total operating budget (global budget[2]) for each hospital for the following year is determined in annual negotiations with the provincial health ministry, and periodic lump-sum payments are made.

Hospital budget negotiations usually take into account government-determined bed/population and staff/patient ratios, the relative efficiency of the hospital's operations, and changes in the volume or mix of services provided. Many provinces have incorporated savings-retention programs to provide incentives for hospital administrators to run their institutions economically. These programs enhance the flexibility that global budgeting affords administrators in determining how to allocate human and other resources.[3]

In the early years of public health insurance, provincial authorities were relatively generous in covering hospital deficits. In the past few years, however, several provinces have put hospitals on notice that the money just is not there and that budget overruns will not be made up.[4] As a result, some hospitals have removed beds from service for part of the year and have limited the number of operations they perform in order to stay within budget.[5]

Even so, provincial approval of hospital operating budgets may be no more important in controlling overall costs than provincial control over new hospital beds, services and equipment. Prior provincial approval based on a needs assessment is required for capital expansions and major renovations or acquisitions. Most funding for capital projects comes from the provinces as well, although the hospital (or local government) is usually required to fund some portion (10 percent to 40 percent) of the cost.[6] But even if the necessary capital could be raised entirely from bonds or donations, provincial approval would still be required for the funds needed to staff and operate the new service or equipment envisioned. Since the authority to approve an expansion rests with the agency that will have to pay its costs, approval is not given lightly.

The combination of global operating budgets and provincial control over capital improvements can make it difficult just to replace obsolete or worn out equipment, particularly in an era of rapidly developing health care technology. Health and Welfare Canada, a federal government department, points out that capital funding has become a major issue, in part because many Canadian hospitals were built in the late 1950s and 1960s and require renovation.[7]

Government control of hospital operating budgets and capital expansion plans also insures that new technology does not proliferate as rapidly or as extensively in Canada as in the United States.[8] Table 3.1 compares the availability of six major medical technologies in the two countries. In every case, the United States has more units per million inhabitants than does Canada, ranging from 1.2 times the number of organ transplantation units to 8 times the number of MRI units.[9] Of course, there is no objective way to determine the right amount of high-technology equipment

Table 3.1
Comparative Availability of Selected Medical Technologies[a]
Units per Million Persons

Technology	United States (1987)	Canada (1989)	Ratio (U.S./Canada)
Open-heart Surgery	3.26	1.23	2.6
Cardiac Catheterization	5.06	1.50	3.4
Organ Transplantation	1.31	1.08	1.2
Radiation Therapy	3.97	0.54	7.4
Extracorporeal Shock Wave Lithotripsy	0.94	0.16[b]	5.9
Magnetic Resonance Imaging	3.69	0.46[b]	8.0

a. According to the source, "[t]hese technologies were selected for study because they were the only ones for which comparative data could be found. No claims are made for these six as being a representative sample of technology availability overall."

b. 1988 figures.

Source: Dale A. Rublee, "Medical Technology in Canada, Germany, and the United States," *Health Affairs* 8:3 (Fall 1989), pp.178-181

a society ought to have available, and the figures given here may indicate oversupply in the United States rather than undersupply in Canada (or both). Whether the lower availability of these particular technologies in Canada has impeded access to care will be discussed in the next chapter.

◆ Physicians

Canadian physicians are paid according to fee schedules negotiated periodically between provincial governments and medical associations. The provincial health plans are the sole payers for physician services and extra billing of patients is now prohibited. As noted earlier, payment for physician services is almost exclusively on a fee-for-service basis, with only a few physician organizations paid by capitation.

Generally, the focus of the periodic negotiations has been the overall percentage increase that will be applied to the existing fee schedule. If the medical associations wish to reallocate spending among the various groups of general practitioners and specialists, they are free to do so.[10] Because they are explicitly negotiated with the sole buyer, physician fees (i.e., payments per unit of service) in Canada have escalated much less rapidly than in the United States. The increase from 1971 to 1985 in the level of U.S. physician fees exceeded general inflation by 22.3 percent, in sharp contrast to Canadian physicians' fees, which fell 18 percent behind inflation.[11]

In absolute terms as well, physician fees in Canada are below U.S. levels (see Table 3.2). Office visits to family practitioners are only 20 to 40 percent more expensive in the United States, but surgical fees tend to be 3 or 4 times higher here than in Canada. These fee differentials are reflected in physician incomes and in overall spending on physicians' services. In 1987, the average income of American physicians ($132,300) was 1.6 times the average income of Canadian physicians (U.S. $82,764; CAN $101,800).[12] In that same year, per capita U.S. spending on physician care was also about 1.6 times Canadian spending.[13]

Given the significantly higher surgical fees in the United States and the higher proportion of specialists here than in Canada, it is perhaps surprising that the differential in average physician incomes and per capita spending on physician services is not larger. Several technical considerations contribute to this result,[14] but it must be noted also that control of fee levels does not translate automatically into control of overall physician expenditures.

As with all service expenditures, total expenditures on physician services depend on the number of services used as well as on the price of each service. The standard formulation in this case would be:

Total Physician Expenditures =
Covered Population x
Average Number of Services Used per Person x
Average Price per Service

Table 3.2
Physician Fees (in U.S. Dollars) for Various Procedures, United States (Medicare) and Ontario, 1986

Procedure	United States (Medicare)[a]	Ontario[b]	Ratio (U.S./Ontario)
Office visit, ltd. service, established patient	$ 21	$ 15	1.4
Office visit, comp. service, new patient	53	43	1.2
Repair of inguinal hernia	732	241	3.0
Transurethral resection of prostate	1,412	385	3.7
Removal of cataract with insertion of intraocular lens prosthesis	2,000	478	4.2
Coronary-artery bypass, 3 grafts	4,663	1,184	3.9
Examination of frozen section on breast biopsy	87	32	2.7

a. U.S. figures are mean Medicare-submitted charges in 1986 and are specialty-specific. Office visits are for family practice only.

b. Ontario figures are from the 1986 Ontario Schedule of Fees. In the source, Ontario fees are quoted in Canadian dollars. Here all figures are given in U.S. dollars. Canadian dollars were converted to U.S. dollars using the Organization for Economic Cooperation and Development's purchasing power parity currency conversion factor for 1986: $1.22 CAN = $1.00 U.S.

Source: William C. Hsiao, Ph.D., et al., "Results and Policy Implications of the Resource-Based Relative-Value Study," *The New England Journal of Medicine* 319:13 (September 29, 1988), pp.881-888. Table 4, p.887.

Another way of formulating total physician expenditures would be:

Total Physician Expenditures =
Number of Physicians in the System x
Average Services Provided per Physician x
Average Price per Service

This rephrasing focuses attention on the alleged role of the physician in "creating demand," or at least influencing the total number of services provided. Clearly, if an individual physician wants to maintain a growing income in the face of external limits on the average price per service, there is no alternative but to provide more services — either by seeing more patients or by providing more services to each patient.

Numerous health economists and researchers have argued that physicians, in fact, do strive to maintain or increase total income in the face of fee freezes or limits by providing more services or, at least, billing for more services by separating services previously packaged together. Many physicians and others deny this, arguing that they only supply services their patients demand.[15] The Canadian experience certainly is consistent with the hypothesis of physician-induced demand. Between 1971 and 1985, per capita utilization of physician services grew much more rapidly in Canada — 67.8 percent, compared to 49.4 percent in the United States.[16] Perhaps more significantly, utilization per physician over the same period rose a total of 25.1 percent in Canada, but only 7.0 percent in the United States.[17]

Not surprisingly, controlling increases in utilization of physician services has become a major issue for the Canadian health care system today. But unlike the United States, where review by third-party payers of physicians' recommendations for hospitalization or surgery has become commonplace,[18] Canada has not attempted to question physicians' judgments about the medical necessity of the treatments they recommend. This professional sovereignty and freedom from outside interference is an aspect of their health care system that Canadian physicians value highly, and one might characterize it as the price they extract for their participation in an otherwise highly regulated system.

In lieu of direct controls, such as utilization review, several provinces in recent years have attempted to achieve more effective control by setting overall expenditure targets for physician services. But only Quebec, having embarked on such a course in the mid-1970s, has had demonstrated success in this regard. There also have been attempts to control costs by limiting the supply of participating physicians. Because controlling expenditures on physician services is of great policy interest in the United States at present, we explore each of these approaches in somewhat greater detail.

◆ Expenditure Caps/Targets

Since the mid-1970s, Quebec has limited the incomes of physicians by setting a maximum amount payable to each individual general practitioner each calendar quarter. If this quarterly cap is exceeded, any further billings in that quarter by that physician are paid at only 25 percent of the established fee schedule. In addition, there are separate annual global caps for general practitioners and for specialists. If either cap is exceeded in a given year by the profession as a whole, fees are reduced in subsequent years until the excess payments have been recouped.[19] One might expect that this particularly stringent approach to expenditure control would lead to severe emigration of physicians. This has not occurred, probably because Quebec is the only province in which a French-speaking culture predominates.

None of the English-speaking provinces has moved yet to adopt Quebec's approach in its entirety. But four have begun to experiment with systems — some formal, some informal — under which excessive increases in utilization in a given year lead to fee reductions (permanent or temporary) in the subsequent year.

Manitoba was the first of the four to incorporate a fee adjustment based on utilization increases into a formal agreement between the provincial government and the medical association. The agreement, first effective for benefit year 1984-85, provided that future fee increases would be reduced by the amount of any "unattributed" utilization — utilization that could not be explained by increases in the number of insured persons or participating physicians, changes in health care delivery or other specified factors. Negotiations for the third-year fee increase under this agreement (1986-87) went to binding arbitration. The provincial government, dissatisfied with the arbitrator's award, paid it but terminated the binding arbitration arrangement for future negotiations. The medical association threatened a strike. A provincial election intervened, and the agreement reached with the new government reinstated binding arbitration but omitted any reference to fee adjustments based on utilization. Because of the short time the utilization agreement was in effect, conclusive evaluation of its impact on utilization increases is not possible.

In British Columbia, a three-year agreement begun in fiscal year 1986-87 calls for excess utilization in any year to be paid in part from funds set aside for the following year's fee increase and in part from a provincial reserve fund. Excess utilization is defined as more than a 3 percent increase over the previous year. Pursuant to the agreement, second-year fees were reduced by 4 percent for the first three months of the year to offset 1 percent excess utilization in the first year. If utilization increases exceed the funds available in future years, negotiations will be reopened for the remaining years of the agreement.

For 1987-88, the government of Saskatchewan proposed no increase in total payments to physicians. To achieve this in the face of an average 4.2 percent annual utilization increase, the government proposed to discount fees 4.2 percent below the previous year's rates. If the actual utilization increase were less than 4.2 percent, then the withheld amounts would be paid retroactively. The plan was not an absolute cap, however, because there was to be no further reduction in fees if the actual utilization increase exceeded 4.2 percent. The medical association took the province to court, delaying the plan. A December 1988 appeals court ruling affirmed the government's right to implement the proposed arrangement. The government was expected to press its position in later negotiations, which had not yet begun as of that date.

Utilization has been discussed in rate negotiations in Ontario since 1981, but controls on utilization never have been incorporated into the formal agreement between the provincial government and the medical association. The 1987-88 negotiations went to a nonbinding arbitrator (fact finder) who concluded that the cost of increased utilization per physician should be shared between the government and the profession and, therefore, recommended a 0.75 percent reduction in the fee increase for that year based on the previous year's 1.5 percent utilization increase. Both parties accepted the recommendation and agreed to study utilization issues. The 1988-89 negotiations also went to a fact finder, whose recommendation followed the previous year's pattern, although the estimated utilization increase was larger. The provincial government, though pleased at the fact finder's acceptance of the principle of linking fees and utilization, insisted on its lower original offer and imposed a 1.75 percent increase unilaterally. The government terminated the existing agreement on fee negotiations and announced plans to establish a new mechanism. The medical association expects officials to seek a formal agreement including utilization controls and has announced its insistence on binding arbitration as the *quid pro quo* for any such agreement.

Thus, none of the English-speaking provinces have established an absolute upper limit on physician expenditures, and have been careful to avoid the appearance of negotiating the income levels of individual physicians. Medical associations resist making physicians financially responsible for increased utilization, acquiescing only reluctantly and insisting, at a minimum, on binding arbitration of fee negotiation impasses in return for accepting utilization thresholds in any contract. (Only two provinces so far have agreed to submit fee increase disputes to binding arbitration.) Outside Quebec, the notion of government control over individual physicians' income remains an absolute anathema.

In sum, the potential for expenditure control that a single-payer system has is considerable. But no province other than Quebec has implemented a structure that makes that power effective in controlling expenditures for physician services. In the words of Barer, Evans and Labelle, scholars of the system for more than 20 years:

> Fee negotiation has continued to limit the rate of fee escalation in the other [than Quebec] provinces relative to contemporary American trends, but faster increases in utilization in Canada have largely offset the impact on real expenditures per physician. Only in the early 1970's, and subsequently only in Quebec (and perhaps Manitoba), has fee control translated into expenditure control.[20]

◆ Physician Supply Constraints

Since Canada has about as many physicians per capita as the United States and the long-term growth rates in physician supply have been similar, some would say that Canada is experiencing a physician glut similar to that of the United States.[21] If, as suggested earlier, the number of physicians in the system is indeed a major determinant of total physician expenditures, then any such oversupply of physicians is a matter of considerable policy concern.

Government in Canada apparently views the problem in these terms. In the 1960s and early 1970s, as many foreign medical graduates were licensed in Canada as were graduated from Canadian medical schools — about 900 of each per year. Federal-provincial discussions of the problem led to changes in immigration policy in early 1975 that severely curtailed physician immigration. Physician supply continued to grow, however, as medical school enrollment doubled between 1965 and 1983-84, reaching a peak of about 1,800 per year. More recently, Quebec and Manitoba have reduced medical school enrollment and the nationwide number of entrants has dropped about 4 percent from the 1983-84 peak.[22]

If political considerations make it difficult to reduce the supply of new physicians very much, another approach is to limit the number of physicians who are allowed to bill the provincial insurance plan. British Columbia tried this approach in 1983.[23] It has the largest per capita physician supply and pays the highest fees, but its expenditure control efforts were far behind those of the other large provinces. In addition, there were too many physicians in urban areas and not enough in rural areas.

To address these issues, British Columbia began to restrict the issuance of billing numbers. Two main types of billing numbers were established: temporary numbers that were geographically unrestricted, and permanent numbers that held geographic restrictions. The policy was challenged immediately in the courts as a violation of a number of constitutional rights, a challenge that eventually overturned the policy. In the meantime, enforcement of the policy waxed and waned with the fortunes of the ongoing court battles. Whether the policy of restricting billing numbers had any success in controlling physician expenditures cannot be determined.

Chapter 4

How Well is Canada Doing?

References to the success of the Canadian health care system have become increasingly frequent in the American press. If one measures access by health insurance coverage and health care cost by percentage of gross national product, Canada is doing well. All Canadians have health insurance coverage and Canada spends a smaller percentage of its total economic output on health care than does the United States. But if cost containment is measured by rates of increase in health care spending, and access by prompt availability of needed services, the picture is less clear. An analysis of trends suggests that: (1) Canada has done no better than the United States in taming health care cost escalation; and (2) Canada may be starting to have problems with access to needed services, particularly when expensive, high-technology care is required.

This section examines the evidence on cost containment and reviews the ongoing debate in Canada over access to care.[1]

◆ Health Care Cost Containment

International comparisons of health care expenditures must be adjusted in some way to account for differences in size among national economies. There are two ways to do this. One is to express health care expenditure as a percent of total economic output — gross national product (GNP) or gross domestic product (GDP).[2] The other is to express expenditure in per capita terms.

Comparisons between Canadian and U.S. health care expenditures often use the former method. On this measure Canada has been more successful that the United States in containing costs: health care expenditures as a proportion of GNP have not grown as fast in Canada as they have in the United States. Canada spent a slightly higher percentage of GNP on health than the United States in the 1960s, but fell below the U.S. level in 1969 and has stayed there. The most recent available figures show Canada spending

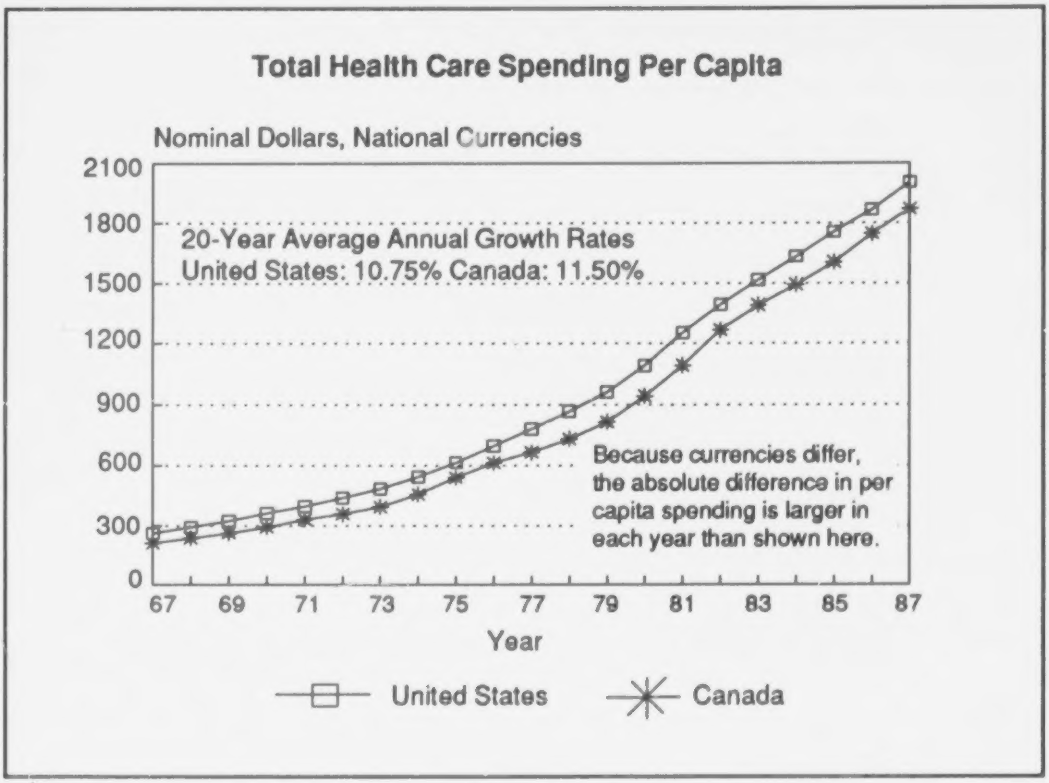


Figure 4.1

8.98 percent of GNP on health care (1987), and the United States spending 11.06 percent (1988).[3] As this chapter demonstrates, however, when health care costs per capita are compared, the two countries have very similar growth patterns. Thus, this chapter argues, the difference in the proportion of GNP going to health care is due not to differences in how the two countries finance and deliver health care but to differences in overall economic growth rates — the Canadian economy grew significantly faster than the U.S. economy over the past two decades.

For this study, we examined the growth rate of per capita health spending[4] in Canada and the United States from 1967 through 1987 (the most recent 20-year period for which health spending totals are available for both countries). Figure 4.1 plots per capita health care spending in the United States and in Canada during that period, in the currency of each country and in the nominal dollars of each year (i.e., not adjusted for inflation). Canadian spending (CAN $1,869 per capita in 1987 — $1,520 after conver-

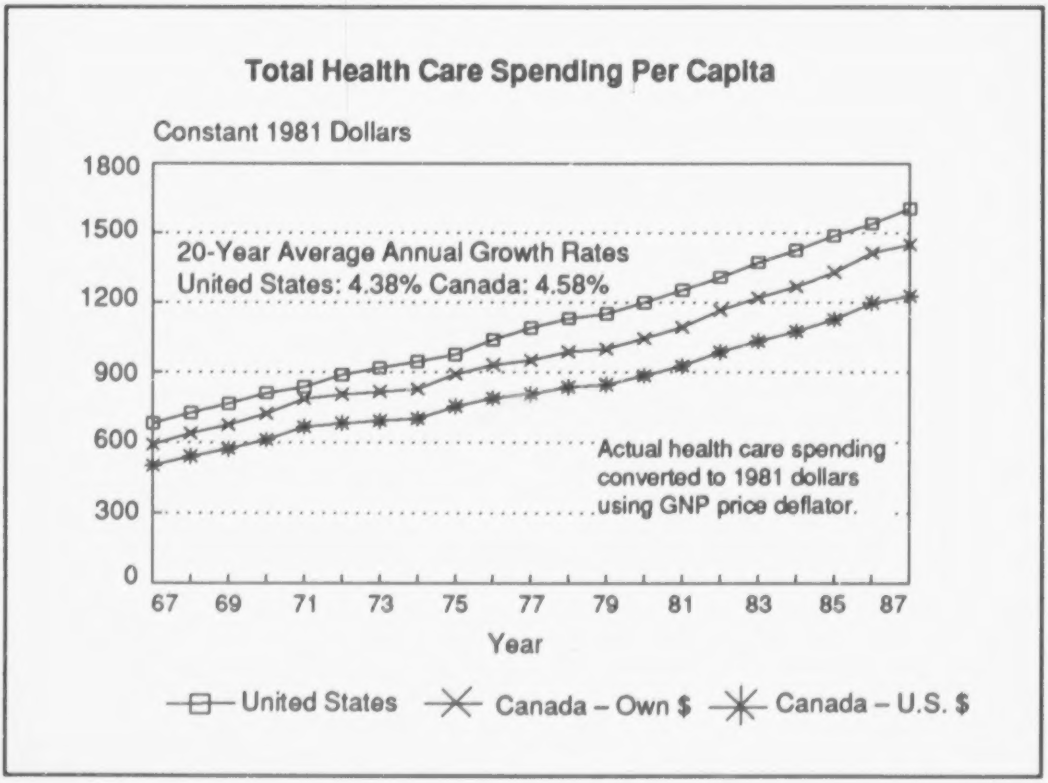


Figure 4.2

sion to U.S. dollars[5]) is lower than U.S. spending ($2,004 per capita in 1987) in absolute terms, but the similarity of the growth trend is striking. During the 20-year period, Canada's health care spending per capita grew at an average annual rate[6] of 11.50 percent, compared to a U.S. rate of 10.75 percent.

Because general inflation was greater in Canada than in the United States during this period, however, comparing growth in nominal dollars does not accurately measure the increase in real economic resources devoted to health care. To gain a more accurate picture of differences in the resources going to health care in the two countries, Figure 4.2 displays health spending per capita in constant 1981 dollars.[7] To remove any distortion in the comparison due to the varying relative value of the two currencies, Canadian expenditures are shown in both 1981 Canadian dollars and 1981 U.S. dollars.[8] The similarity in growth patterns remains striking, whichever measure is used. In fact, on an inflation-adjusted basis, the average growth rate over the 20-year

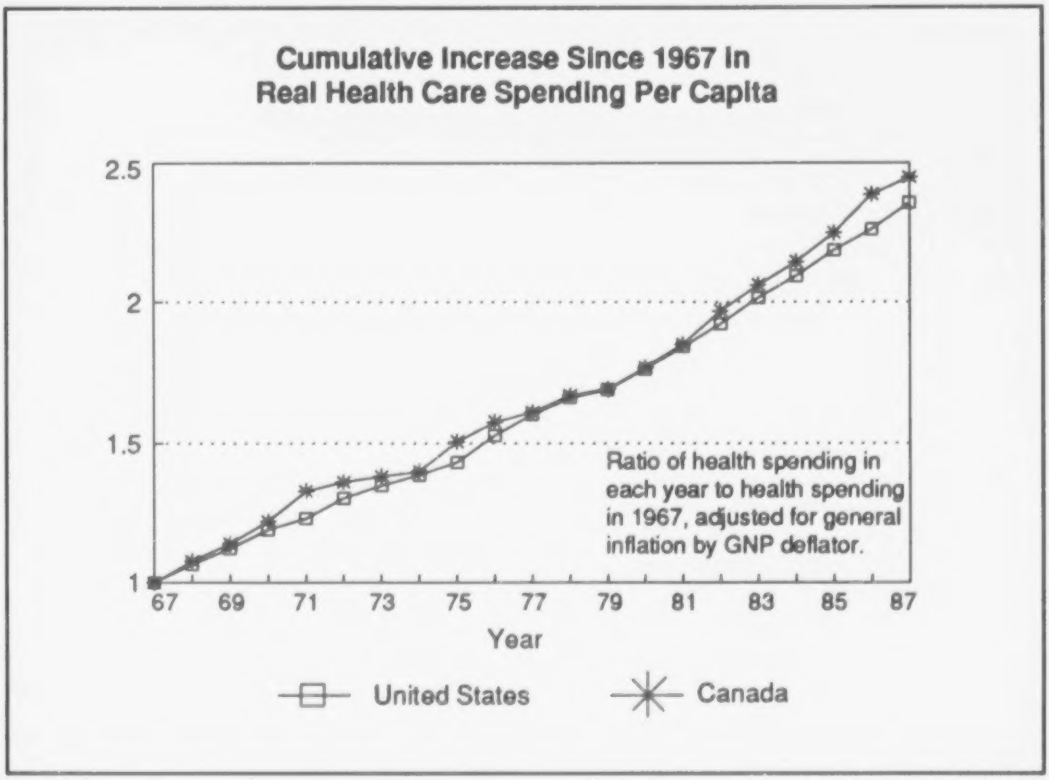


Figure 4.3

period is slightly lower in the United States: 4.38 percent per year compared to 4.58 percent per year in Canada. In Figure 4.3, each country's real health spending per capita is displayed as the ratio of spending in that year to spending in 1967, such that the graph represents the cumulative growth of real per capita spending over the 20-year period. With the visual distortion caused by the difference in base-year spending thus removed, the almost precise coincidence of the trend lines is absolutely clear.

But does the similarity of long-term trends mask some significant change during the 1967 to 1987 period? In particular, did Canada's growth rate slow after universal public health insurance was implemented fully, as some analysts have argued?[9] To examine this question, Figure 4.4 presents average annual growth rates in U.S. and Canadian health care spending per capita over successive 5-year periods, beginning in 1967. As shown, health care costs grew more rapidly in Canada than in the United States between 1967 and 1972. Canada's provinces implemented univer-

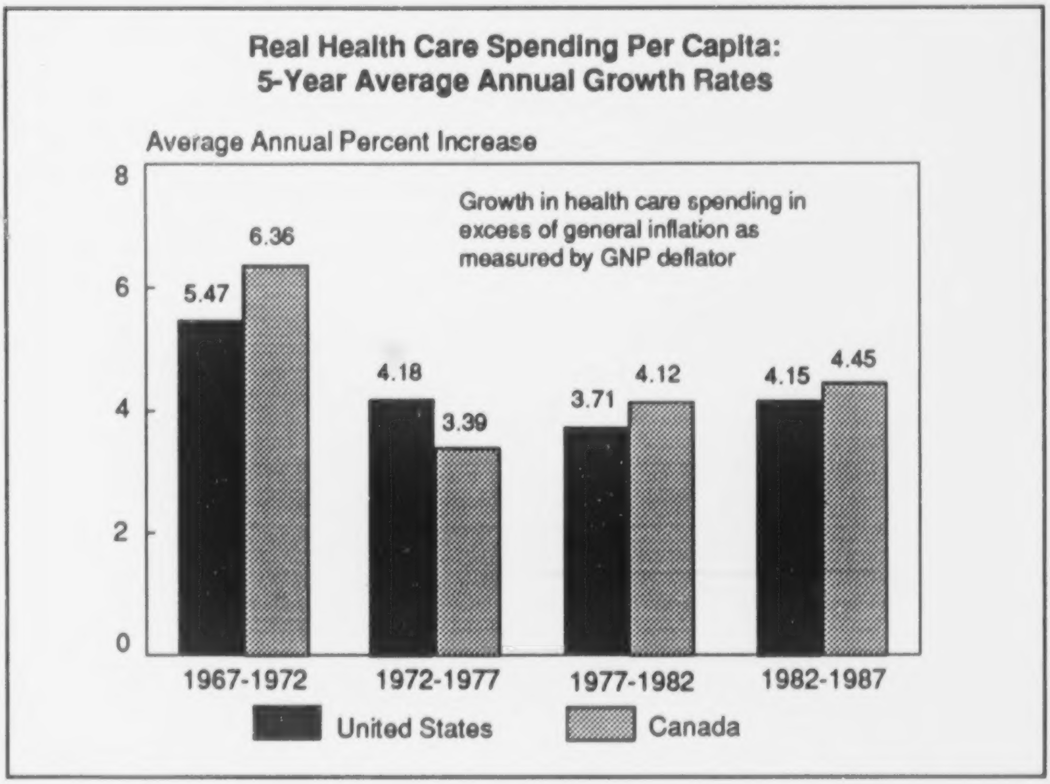


Figure 4.4

sal public medical insurance between 1968 and 1971,[10] so its somewhat more rapid escalation of costs in this period may be due to increased demand for services from newly insured individuals. After full implementation of public insurance, the rate of increase slowed significantly in Canada. But, despite the 1972 expansion of U.S. Medicare to include disabled persons under age 65, the U.S. growth rate fell as well, suggesting that the advent of the public insurance system in Canada was not the only factor affecting health care costs at that time. Since 1977, real health spending per capita has grown a bit more slowly in the United States than in Canada. The average growth rate during 1977 to 1987 was 4.28 percent per year in Canada and 3.93 percent in the United States.[11]

It may be argued that health spending would have grown somewhat faster in the United States if the number of uninsured Americans had not increased between 1977 and 1987. One way to adjust for this factor is to re-estimate U.S. health spending in 1977

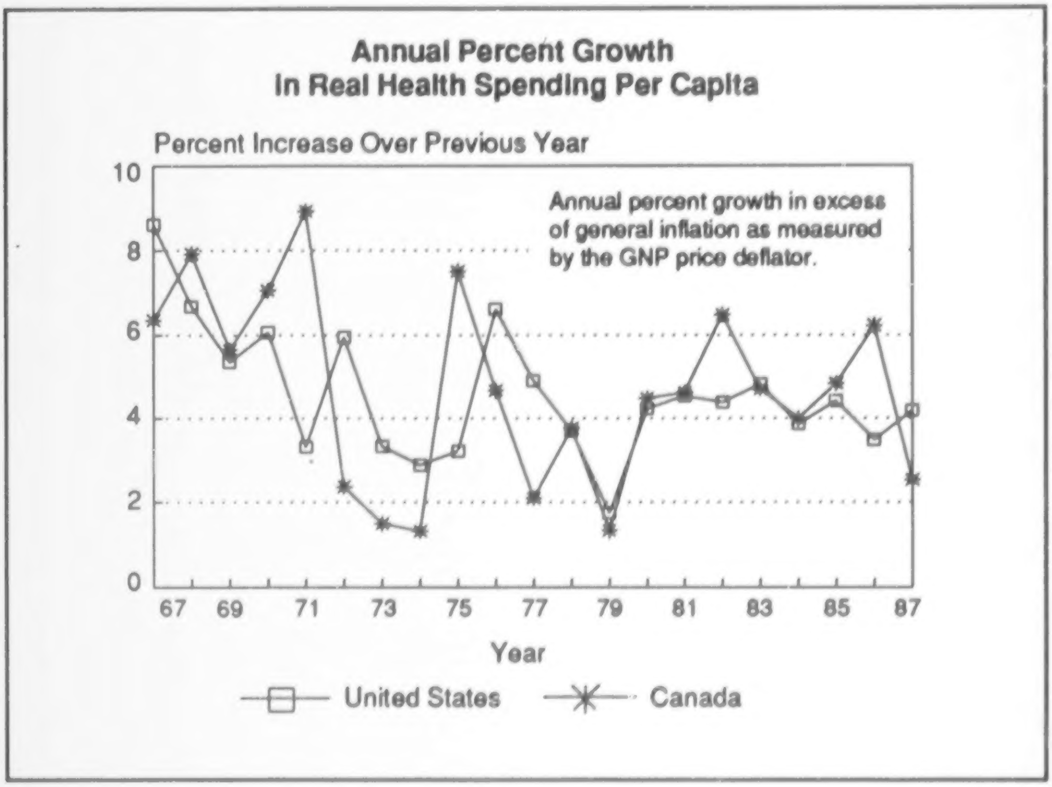


Figure 4.5

and 1987, under the assumption that all U.S. residents had health coverage in each year, and then recompute the growth rate from the new spending totals. Carrying out these calculations raises the estimated real U.S. growth rate per capita to about 4.4 percent per year, only slightly higher than the Canadian rate.[12]

Growth rates, of course, fluctuate from year to year. Figure 4.5 plots the yearly growth rates in real health care spending per capita over the entire 20-year period, yielding similar year-to-year patterns.

A final way of looking at the growth rate issue is displayed in Figure 4.6, which plots per capita health spending in Canada as a percentage of per capita U.S. spending (in constant 1981 U.S. dollars) from 1967 through 1987. As can be seen, the percentage fluctuated in a very narrow range over the period. Canada was spending about 75 percent of what the United States spends per capita on health care before implementation of universal public health

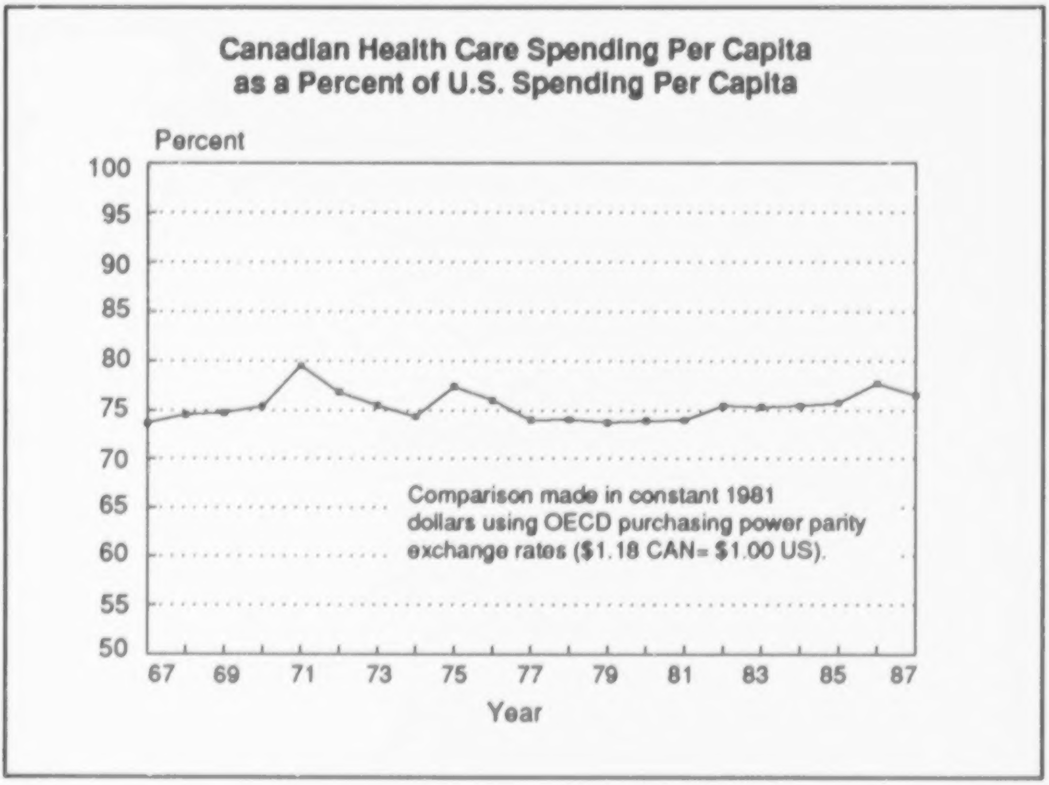


Figure 4.6

insurance and has continued to do so since. The factors leading to different levels of health care spending in the two countries, therefore, must be more basic than the difference in health care financing arrangements.

The analysis presented here is consistent with recently published work by a pair of international experts. Writing in the Fall 1989 *Health Affairs*, Schieber and Poullier compared growth rates of health care spending per capita between the United States and Canada (along with five other large democracies), using price indices specific to medical care.[13] In this way, they were able to divide overall growth in health care spending for 1960 to 1970, 1970 to 1980 and 1980 to 1987 into real growth in consumption of health care resources and medical price inflation in excess of general price inflation. In each period, excess medical price inflation and growth in real consumption of health care resources per capita were very similar in the two countries (see Table 4.1).

Table 4.1
Annual Growth Rates[a] Of Health Care Spending, 1960-1987

	1960-70	1970-80	1980-87	1960-87
	Nominal Health Spending Per Capita			
United States	8.1 %	11.5 %	9.4 %	10.2 %
Canada	9.3 %	12.5 %	9.9 %	10.7 %
	Real[b] Expenditures Per Capita			
United States	4.6 %	3.9 %	1.7 %	3.9 %
Canada	7.0 %	3.8 %	1.5 %	3.5 %
	Excess Medical-Specific Inflation			
United States	-0.9 %	0.0 %	3.0 %	1.1%
Canada	-1.0 %	0.0 %	2.9 %	1.2%

a. All entries are annual compound growth rates.

b. In this paper, we have used the term "real" health spending to denote comparisons made in constant (i.e., GNP-deflated) dollars. Schieber and Poullier had available to them price indices specific to the health care sector in each country. They were therefore able to separate increases in health spending into three components: general inflation (not shown), medical (price) inflation in excess of general inflation, and real growth in the consumption of health care resources. The entry "real expenditures per capita" in this table reflects the last of the three components.

Source: George J. Schieber and Jean-Pierre Poullier, "[DataWatch] International Health Care Expenditure Trends: 1987," *Health Affairs* 8:3 (Fall 1989), Exhibit 5, p.174.

If per capita health spending is growing as fast in Canada as in the United States, why does health spending continue to consume a smaller proportion of total Canadian economic output than of U.S. output? A major reason appears to be that Canada's economic output per capita has grown faster than ours, particularly from 1967 through 1976. In 1967, Canada and the United States spent virtually identical proportions of GNP on health care (6.33 percent in the United States, 6.38 percent in Canada). Two years later, the Canadian figure had fallen slightly below the U.S. figure; the gap widened noticeably after 1971 (see Figure 4.7).

Because universal insurance was implemented in Canada between 1968 and 1971, some analysts have attributed Canada's slower increase in health spending as a percent of total economic output after 1971 to improved cost controls made possible by a

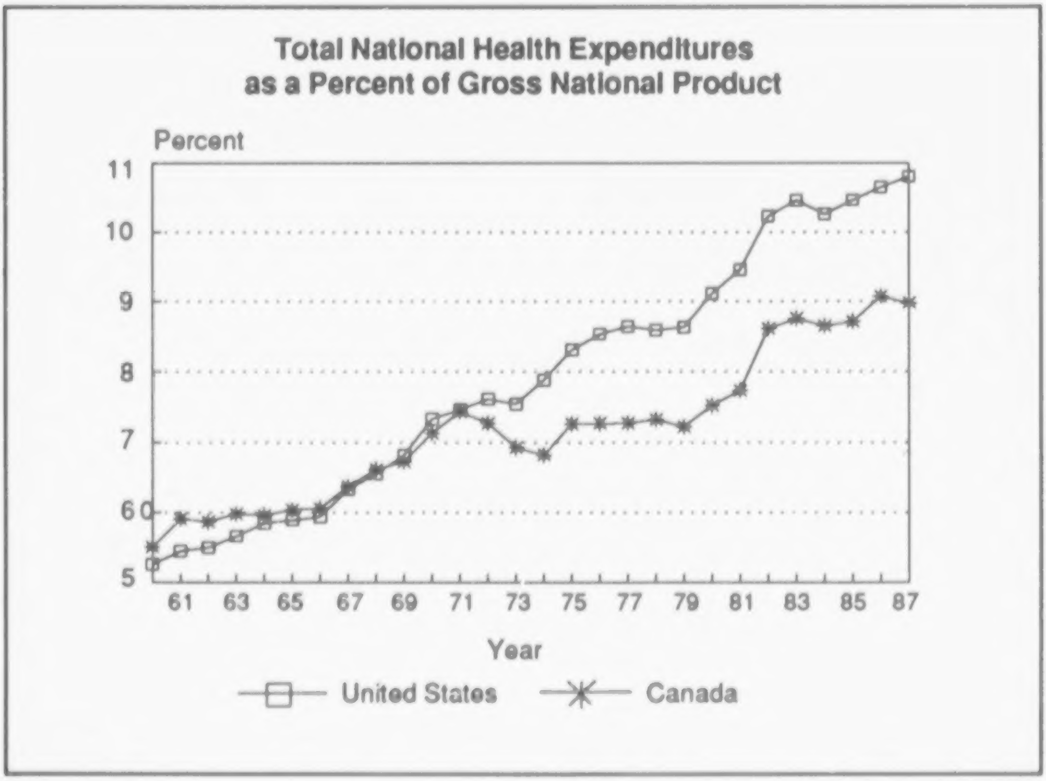
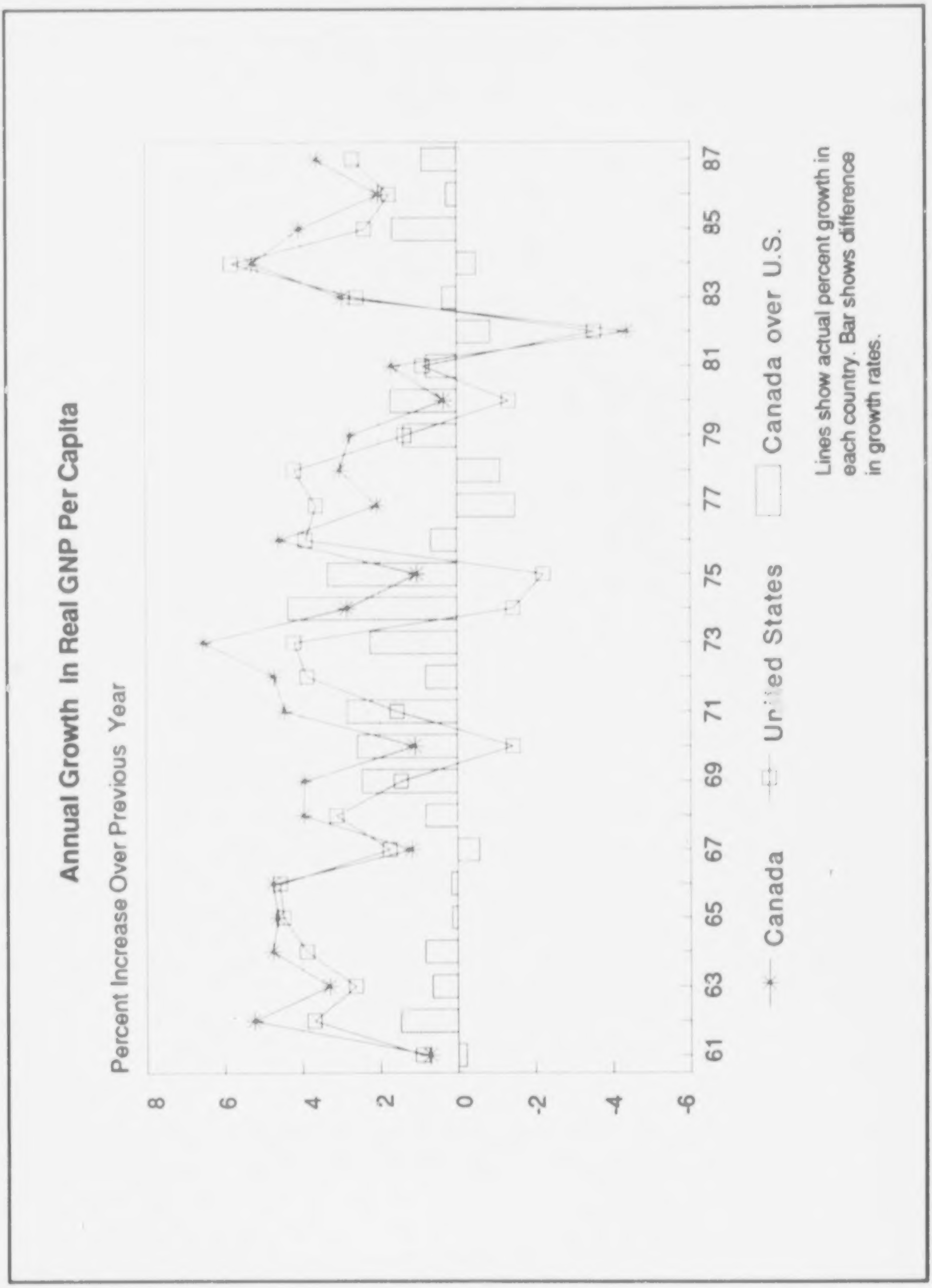


Figure 4.7

universal government-financed system.[14] But an alternative explanation is possible, one more consistent with our observation that Canada's provincial health plans have not been more effective than the pluralistic U.S. health system in controlling per capita health spending. As Figure 4.8 shows, beginning in 1968 Canada's economy grew faster than the U.S. economy (on a per capita basis) for a sustained period of 9 years. In 6 of those years, the difference in growth rates was more than 2 percentage points per year. Over the entire 20-year period (1967 to 1987), Canada's real GNP per capita grew 74 percent; U.S. real GNP per capita grew only 38 percent.[15] Given very similar growth rates of per capita health spending, the country that expands economic output more rapidly will spend a smaller proportion of that output on health care.



Annual Growth In Real GNP Per Capita

Percent Increase Over Previous Year

Lines show actual percent growth in each country. Bar shows difference in growth rates.

Figure 4.8

◆ Access

Until recently, Canadians viewed their health care system as the best in the world. They perceived that every Canadian had access to necessary care with no financial barriers and that the most advanced procedures and technology were available to all. Many Canadians probably still hold that view. "Medicare," as Canadians call their health care program, remains the most popular government social program; Canadian politicians, federal or provincial, attack it only at their peril.

At the same time, there is growing evidence of access problems in the Canadian health care system, at least for high-technology specialty care, and growing concern over the continuing escalation of costs. The debate is raging in the popular press, as the headlines in Exhibit 4.1 suggest, making it clear that the Canadian health care system indeed suffers access problems and waiting lists at least for certain kinds of care in some parts of the country. Specific complaints about lack of access include:

- Long waits for certain surgical and diagnostic procedures — not only surgeries such as coronary artery bypass grafts, hip replacements and lens extraction (cataract surgery), but also preventive tests such as mammograms. Deaths have been reported among patients on waiting lists for heart surgery.

  > In an effort to cut costs, most provincial governments have clamped down on hospital budgets at a time when many nurses are quitting their jobs to protest poor pay and working conditions. The result has been lengthening waiting lists and a toll of deaths among patients who cannot survive long enough to receive the surgery they need. In Manitoba, six heart patients died last year before they reached the operating room at Winnipeg's Health Sciences Centre. In Toronto — where an estimated 1,000 people are facing waits of as long as a year for bypass operations at three hospitals — two people have died since December. Last month, long waiting lists forced the city's highly regarded Hospital for Sick Children to send home 40 children who need heart surgery. (*MacLean's*, February 13, 1989, p. 32)

Health Care Headlines in the Canadian Press

"Sick to Death: Caught between Rising Costs and More Restraints, Hospitals are Cutting Services."
— *MacLean's* (Canada's national news magazine), February 13, 1989 (cover story)

"Soaring health costs a provincial headache."
— *The Ottawa Citizen*, May 29, 1989

"Bed closings blasted: 91 left on backlog for urgent surgery."
— *The Winnipeg Free Press*, July 5, 1989

"CO$T of LIVING: Clogged heart programs are just a symptom of a system needing adjustment."
— *The London (Ontario) Free Press*, June 10, 1989

"Ontario's Health Care is in Critical Condition."
— *The London Free Press*, May 27, 1989

"Health system ill in Quebec, says founder."
— *The Ottawa Citizen*, January 25, 1990

"Need surgery, medical tests? Go to the end of the line."
— *The Globe and Mail*, Toronto, Ontario, May 28, 1988

"Budget limit on MDs' services urged by major Ontario report."
— *The Globe and Mail*, May 24, 1989

"N.S. Royal Commission recommends controls on doctors."
— *The Evening Telegram*, St. John's, Newfoundland, December 9, 1989

"HSC staff denounce deplorable conditions in emergency ward."
— *The Winnipeg Free Press*, November 24, 1989

Exhibit 4.1

> St. Clare's [Hospital, Newfoundland] four-month wait for a first-time mammogram makes it almost impossible to do preventive breast cancer screening; the hospital can only handle women who need an immediate diagnosis. (*The Globe and Mail*, Toronto, May 28, 1988)

- Temporary closure of hospital beds to remain within budget, even though the beds are needed for patients on waiting lists.

> New Brunswick's hospitals, which were forced to take about 300 hospital beds out of service after Premier Frank McKenna's Liberal government tightened hospital budgets, are among the most seriously affected. At Moncton Hospital, some patients are kept in hallways and even in closets, while a total of 2,300 people were on waiting lists for surgery last month. . . . The situation in parts of the Prairies is equally alarming. (*MacLean's*, February 13, 1989, p. 33)

- Overcrowded emergency rooms and inability to admit patients in need of emergency care, due to overcrowding.

> Stella Lacroix's death started as a suicide. But most people here [Toronto] think it ended as something else. Moments after she swallowed a quart of cleaning fluid, she changed her mind and raced to the nearest emergency room. The hospital wasn't equipped to perform the surgery she needed to stop internal bleeding, so her doctor began a frantic search for an available bed elsewhere in the Toronto area. "She was turned away from 14 hospitals," the doctor . . . said after his three-hour search had failed. "There was no space anywhere and she just bled to death. This woman needed immediate care and we couldn't get it for her." (*The Washington Post*, December 18, 1989, p. 1)

Additional excerpts from press reports on these topics appear in Appendix 1.

Nor has the debate been restricted to the press. The scholarly community has raised concerns[16] and several provinces have established special commissions to make recommendations about the future of health care.[17] But rigorous quantitative analysis of these problems has yet to be undertaken.[18] In the absence of such an examination, the prevalence of long waiting lists, whether they apply to many treatments or only a few, and how they affect the eventual outcome of care remain unanswered questions.

Likewise, the severity of Canada's problems cannot be compared with similar problems, at least for some populations, in the United States.[19]

On the other hand, despite the lack of hard research, the problem of waiting lists is real enough in Canada that at least two provincial health plans have felt it necessary to permit patients to seek care in the United States for certain conditions. Coronary bypass surgery and lithotripsy have been identified as areas in which Canada has significantly fewer resources available than the United States (see Table 3.1). To reduce a waiting list of 700 patients needing cardiac surgery, the British Columbia Health Association has contracted with two Seattle hospitals for up to 50 coronary bypass surgeries each over the next several months (until a new cardiac service opens in Vancouver) and may contract with two more Seattle hospitals for another 100 surgeries.[20]

In Ontario, a volunteer organization called "Heartbeat Windsor" has arranged for several Detroit hospitals to provide cardiac surgery to Canadian patients and accept the Ontario Health Insurance Plan rate as payment in full. In its first seven months of existence, the organization arranged 150 operations.[21] Alberta's health plan also has said it will pay if Albertans wish to travel to Detroit to avoid waiting for heart surgery.[22] With only one lithotripter in all of Ontario (a second one is scheduled), half of the lithotripsy patients at Buffalo General Hospital in nearby New York are Canadians.[23] (Extracorporeal shock wave lithotripsy breaks up kidney stones without surgery, greatly shortening hospital stays.)

Reasons for the apparent access problems are a matter of considerable debate within Canada. Providers argue that the health care system simply is underfunded, that government is too concerned about costs and not enough about access and quality. Provincial health ministries counter that providers (especially physicians) are not using resources efficiently and are milking the system. They note that Canada spends more on health care than almost every other developed country in the world. (In per capita terms, only the United States is higher; as a proportion of GDP, only the United States and Sweden rank higher and Sweden ranks very close to Canada.)[24]

Providers disclaim responsibility for excess utilization.[25] They (and some other observers) blame consumers for any overutilization that might exist — noting that, because there are no out-of-pocket charges to the patient at the time of service, consumers have no financial incentive to avoid seeking care that may be medically unnecessary or only marginally beneficial.[26] Any such tendency is reinforced by the fact that, because consumers never see a bill or a premium invoice,[27] they have no real sense of how much the system costs.

Nevertheless, Canadians continue to believe strongly in the right to "free" health care. As one Ontario resident put it in a letter to the editor of *The Windsor Star* (7/12/89): "[T]he people of Windsor and of Ontario have a right to expect that their medical system will provide them with the best of care at no cost." The prevalence of this view was borne out by the unanimous Parliamentary approval of the 1984 Canada Health Act in the face of strong opposition from organized medicine and provincial governments. But the public's insistence on "free" care, coupled with continually rising health care costs, has led, in the view of some observers, to a system that emphasizes the provision of routine medical services for the large majority of the population at the "expense" of the minority with specialized needs. As one analyst from a conservative Canadian policy research institute has noted: "A growing number of operations are triaged because resources are used to continue first-dollar coverage for sniffles and splinters."[28]

Others have pointed out that the planning and resource allocation system does not work very well. The provincial role has been characterized as simply limiting the amount of resources available, relying on physicians and hospitals to allocate them in an efficient manner (without any procedures for putting available resources to better use).[29] In this view, the people allocating the resources have a vested economic interest in those resources, which may not make for an efficient allocation of resources from a public perspective. Some have proposed privatization of diagnostic and outpatient surgical facilities as a possible remedy for these problems.[30]

As the debate progresses, the political popularity of "free" care motivates the government to avoid any proposals that appear to cut back on benefits or shift costs to the consumer. Government proposals usually seek to shift more of the risk of excess utilization to the providers. For example, the governments of Ontario and Quebec are promoting alternatives (called Comprehensive Health Organizations or CHOs in Ontario and OSIs in Quebec) that would be more similar to American HMOs than anything now on the Canadian scene.[31] The Ontario "Premier's Council on Health Strategy" recently recommended an overall annual cap on total reimbursement to physicians.[32] As noted in Chapter 3, several provinces now take past utilization increases into account when negotiating physician fees. Another possible approach, recently suggested by one member of the Canadian Medical Association's board of directors, is "fee-for-benefit" reimbursement.[33] Under it, physicians would be paid a set amount for treating a specific illness, regardless of the number of visits or procedures required. (This approach is akin to the diagnosis-related group payment system for hospital services under Medicare in the United States.)

Government critics, largely members of the provider community, want to shift more of the system's costs to the consumer at the point of service by introducing coinsurance and/or reducing covered services. This serves a dual purpose in their view: it discourages unnecessary utilization, and it brings more money into the system. Conventional wisdom in Canada would suggest that, given the longstanding political dynamics, such a change seems very unlikely. But some surprising voices are beginning to be heard on this side of the debate. Recently, a committee of Quebec's National Assembly was startled when Claude Castonguay, considered the father of Quebec's medicare system, recommended the establishment of privately run health care centers to compete with publicly run hospitals and a voucher system to encourage competition among providers.[34]

The Canadian resource allocation process and the debate over access issues are highly political. Since three-quarters of the entire health care bill in Canada is allocated through government budgets, the health care sector has to compete against other priorities in the political arena. Thus, creating a sense of imminent crisis helps the health care industry argue for additional resources or fend off deeper cuts. Not surprisingly, physicians respond to every proposal for tighter fee controls with strong rhetoric about the damage to access and quality that will result. Hospitals struggling with fixed budgets may find it advantageous to release information on their waiting lists or close a few beds to dramatize their situation. Media reports become part of the political infighting and are, therefore, all the more difficult to evaluate.

The overall picture appears to be one of a general struggle over how to adapt an enormously popular public entitlement that has fallen on hard economic times. As with many American Great Society programs, Canadian national health insurance was established during a period of vigorous economic growth. Financing the program for its first decade was relatively painless, but no longer. Today Canada has access problems that hurt some patients, at least by diminishing potential quality of life for a period of several months or more. But it is impossible to quantify the extent of those problems or to compare them in any meaningful sense with the problems in other health care systems.

Chapter 5

U.S. Financing and Fiscal Impact

What impact would implementation of a Canadian-style government-run health insurance system have on government finances in the United States? There is no way to get a precise answer to this question because no one knows exactly what a U.S. version of publicly operated health insurance would look like. Even without a precise specification, however, it is possible to get an idea of the cost involved and its likely impact.

This chapter compares the current public expenditures and tax burdens in the two countries and the different roles of U.S. states and Canadian provinces. It then presents a rough estimate of the likely additional taxes that would be required if public health insurance modeled on the Canadian system were introduced in the United States.

◆ Overall Public Sector Comparison

The size of the public sector relative to the total economy is larger in Canada than in the United States (see Table 5.1).[1] In 1987, total government expenditures consumed 38.5 percent of GNP in Canada versus 34.8 percent in the United States — an 11 percent larger share in Canada.[2] The relative difference between non-defense expenditures was even greater — 36.7 percent versus 28.3 percent of GNP, or 30 percent more in Canada. Total government revenues as a percent of GNP in 1987 were also higher in Canada, but not by as much — 35.0 percent of GNP in Canada versus 32.4 percent in the United States, or 8 percent higher. Given these expenditure and revenue differences, the relative net deficit (across all levels of government) was larger in Canada that in the United States — 3.6 percent of GNP versus 2.4 percent, or a 47 percent higher deficit.[3] On a per capita basis the differences are smaller,[4] but the greater presence of government in Canada is still evident.

The relative tax burden is greater in Canada than in the United States. Table 5.2 shows receipts from the most significant sources

Table 5.1
Relative Size of the Public Sector, 1987 (Federal, State/Provincial and Local Governments Combined)

	Canada	United States	Percent Difference (Canada/U.S.)[a]
Total Government Expenditures (net of investment income)			
– as a percent of GNP	38.5 %	34.8 %	+10.7%
– per capita (U.S.$)[b]	$ 6,522	$ 6,457	+1.0%
Total Government Revenues (excluding investment income)			
– as a percent of GNP	35.0 %	32.4 %	+8.0%
– per capita (U.S.$)[b]	$ 5,917	$ 6,006	-1.5%
Nondefense Expenditures			
– as a percent of GNP	36.7 %	28.3 %	+29.8%
– per capita (U.S.$)[b]	$ 6,217	$ 5,249	+18.5%
Current Deficit (net across all gov't levels)			
– as a percent of GNP	3.6 %	2.4 %	+47.1%
– per capita (U.S.$)[b]	$ 606	$ 451	+34.2%
Gross National Product			
– per capita (U.S.$)[b]	$ 16,924	$ 18,549	- 8.8%

All figures are presented on a calendar year National Income and Product Accounts basis and will, therefore, differ from figures found in presentations based on public budgets.

a. Calculated prior to rounding.

b. Canadian figures have been converted to U.S. dollars using purchasing power parity currency conversion factors published by the Organization for Economic Cooperation and Development. For 1987, $1.23 CAN = $1.00 U.S.

Sources: Statistics Canada, *National Income and Expenditure Accounts: Annual Estimates 1977-1988* (Ottawa: Minister of Supply and Services Canada, 1989), Tables 44 and 45.

U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:7 (July 1989) (Washington: U.S. Government Printing Office), Tables 3.1 and 3.2.

For divisors used (GNP, population), see Appendix 2.

Table 5.2
Relative Burden of Various Taxes, 1987 (Federal, State/Provincial and Local Taxes Combined)

	Canada	United States	Percent Difference (Canada/U.S.)[a]
Individual Income Taxes (including non-residents)			
– as a percent of GNP	13.4 %	10.7 %	+25.2%
– as a percent of personal income	15.4 %	12.8 %	+20.1%
– per capita (U.S.$)	$ 2,265	$ 1,982	+14.2%
Social Insurance (Payroll) Taxes (pensions, unemployment, etc., including employer share)			
– as a percent of GNP	4.8 %	8.9 %	-46.1%
– as a percent of personal income	5.5 %	10.6 %	-48.3%
– per capita (U.S.$)	$ 808	$ 1,643	-50.8%
Corporate Income/Profits Taxes			
– as a percent of GNP	2.8 %	2.8 %	+ 1.7%
– per capita (U.S.$)	$ 475	$ 511	-7.2%
State/Prov'l and Local Sales Taxes (including liquor, tobacco, gasoline, et al.)			
– as a percent of GNP	3.7 %	3.3 %	+12.5%
– as a percent of personal income	4.3 %	3.9 %	+ 7.9%
– per capita (U.S.$)	$ 628	$ 612	+ 2.6%
Property Taxes (personal and business)			
– as a percent of GNP	3.2 %	2.7 %	+15.7%
– per capita (U.S.$)	$ 534	$ 506	+ 5.6%
Federal Customs/Excise Duties/Taxes			
– as a percent of GNP	4.1 %	1.0 %	+298.1%
– per capita (U.S.$)	$ 701	$ 193	+263.3%
All Other Gov't Receipts			
– as a percent of GNP	3.0 %	3.0 %	-0.7%
– per capita (U.S.$)	$ 507	$ 559	-9.4%

a. Calculated prior to rounding.

See Table 5.1 for additional notes and sources.

of government revenue across all levels of government. While the table does not address tax rates per se, it shows how the relative burden of different types of taxes varies between the two countries.

Individual income taxes are the most important source of revenue in both countries.[5] They are considerably higher in Canada, whether measured as a percent of GNP, percent of personal income or per capita. Payroll taxes for social insurance, unemployment compensation and so forth, including the employer share, are the second most important source of revenue in both countries. These are much lower in Canada than in the United States. The combined burden of income and payroll taxes is higher in the United States than in Canada — 19.6 percent versus 18.2 percent of GNP, or $3,625 versus $3,073 per capita. (All comparisons in this chapter are made in U.S. dollars.)

Corporate income/profits taxes hardly differ between the two countries, but nonfederal sales and property taxes are higher in Canada. Taken together, these three revenue sources consume a larger share of total economic output in Canada than in the United States, amounting together to 9.7 percent of GNP versus 8.8 percent of GNP, or $1,637 versus $1,629 per capita.

Perhaps the most significant difference is the federal customs and excise tax category. This category accounts for 4.1 percent of GNP in Canada versus 1.0 percent in the United States, or $701 per capita versus $193 per capita. Almost 60 percent of Canadian revenues in this category come from a 13 percent national sales tax on (primarily) manufactured goods. Receipts from this tax alone, which has no counterpart in the United States, equal about 2.4 percent of GNP. This amount is almost equal to the entire difference between Canada and the United States in total government receipts as a percent of GNP, and more than offsets the lower total of individual income and payroll taxes in Canada.

Thus, the overall tax burden, measured as a percent of economic output, is higher in Canada than in the United States. Much of the difference may not be apparent to the person on the street, however, because — unlike U.S. state and Canadian provincial sales taxes — the Canadian national sales tax is included in the final price of the product and not separately stated at the time of purchase.[6] Nevertheless, it is clear that Canada's social programs, including public health insurance, have led to a higher tax burden and a higher government deficit in Canada than in the United States.

◆ The Role of State and Provincial Governments

Table 5.3 shows the relative contribution of federal, state/provincial and local governments to the overall public sector in each country on several measures. As can be seen, provincial governments have a much larger share of the public sector in Canada than do states in the United States, whether one looks at direct expenditures or own-source revenues (i.e., total revenues less transfer payments from other levels of government).

Table 5.4 compares total provincial and local spending in Canada with total state and local spending in the United States, both per capita and as a percent of GNP.[7] Canadian provincial and local governments spend considerably larger amounts, using either basis of comparison, than state and local governments in the United States, even if spending paid for by federal transfers is excluded from the comparison.

Higher health spending is one reason nonfederal spending is higher in Canada (see Table 5.5). Health and medical care accounted for almost 30 percent of total nonfederal spending in Canada in 1987, but only 18.4 percent in the United States in that year. The $626 difference in per capita nonfederal health spending accounts for more than half of the overall $1,146 difference between the two countries in nonfederal spending per capita (see Table 5.4). Health spending represents a significant share of provincial budgets, ranging from about 25 percent in the Maritime Provinces to 34 percent or so in Ontario and British Columbia (FY1984-85).[8] By contrast, U.S. state spending on Medicaid and other health care programs averages only about 15 percent of state budgets[9] which, as noted earlier, are in turn considerably smaller than provincial budgets on a per capita basis.

Table 5.3
Percent Share of Total Public Sector by Federal, State/Provincial and Local Governments, Various Measures, 1987

	Federal	State/Prov'l	Local
Direct Expenditures (i.e., intergovernmental transfers not counted as expenditures)			
– Canada	44.6 %	38.3 %	17.1%
– United States[a]	61.6 %	24.0 %	14.4%
Own-Source Revenues			
– Canada	50.6 %	39.5 %	9.9%
– United States[a]	62.2 %	21.5 %	16.3%
Individual Income Tax			
– Canada	60.1 %	39.9 %	N/A
– United States[a]	82.2 %	17.8 %	b

a. For the United States, the split between federal and state/local (combined) figures is based on calendar 1987 information. Because the National Income and Product Accounts do not separate state and local revenue and expenditures, the 1987 state/local percentage calculated from these reports was distributed between state and local sources based on fiscal 1986 information reported on a budgetary basis.

b. For the United States, local individual income taxes have been included with state income taxes. Local governments in Canada do not levy individual income taxes

Sources: Statistics Canada, *National Income and Expenditure Accounts: Annual Estimates 1977-1988* (Ottawa: Minister of Supply and Services Canada, 1989), Tables 44-47 and 50.

U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:7 (July 1989) (Washington: U.S. Government Printing Office), Tables 3.2 and 3.3.

U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1989* (Washington: U.S. Government Printing Office, 1989), Tables 457 and 460.

Table 5.4
Comparison of Nonfederal Government Spending, 1987

	Canada	United States	Percent Difference (Canada/U.S.)[a]
Total Direct Expenditures (net of Investment Income)			
– as a percent of GNP	21.4 %	13.4 %	+60 %
– per capita (U.S.$)[b]	$ 3,626	$ 2,480	+46 %
Direct Expenditures Net of Transfers from Federal Gov't			
– as a percent of GNP	17.2 %	11.1 %	+55 %
– per capita (U.S.$)[b]	$ 2,905	$ 2,059	+41 %
Transfers from Federal Gov't			
– as a percent of GNP	4.3 %	2.3 %	+88 %
– per capita (U.S.$)[b]	$ 720	$ 421	+71 %
– as a percent of total non-federal spending	19.9 %	17.0 %	+17 %

a. Calculated prior to rounding.

b. Canadian figures have been converted to U.S. dollars using purchasing power parity currency conversion factors published by the Organization for Economic Cooperation and Development. For 1987, $1.23 CAN = $1.00 U.S.

Sources: Statistics Canada, *National Income and Expenditure Accounts: Annual Estimates 1977-1988* (Ottawa: Minister of Supply and Services Canada, 1989), Tables 44-47 and 50.

U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:7 (July 1989) (Washington: U.S. Government Printing Office), Tables 3.2 and 3.3.

For divisors used (GNP, population), see Appendix 2.

Table 5.5
Nonfederal Government Health Spending, 1987 State and Local Combined vs. Provincial and Local Combined

	Canada	United States[a]	Percent Difference (Canada/U.S.)[b]
Total Direct Health Expenditures			
– as a percent of GNP	6.4 %	2.5 %	+160 %
– per capita (U.S.$)[c]	$ 1,083	$457	+137 %
– as a percent of total nonfederal gov't spending	29.8 %	18.4 %	+61 %
Direct Health Expenditures Net of Transfers from Federal Government			
– as a percent of GNP	4.0 %	1.8 %	+126 %
– per capita (U.S.$)[c]	$ 676	$ 327	+106 %
Transfers from Federal Gov't.			
– as a percent of GNP	2.4 %	0.7 %	+244 %
– per capita (U.S.$)[c]	$ 408	$ 130	+214 %
– as a percent of total non-federal gov't health spending	37.6 %	28.4 %	+32.6%

a. For the United States, this table includes spending labelled "health and hospitals" and "medical care" in the National Income and Product Accounts. The state and local hospital spending figures, in particular, appear to include total expenditures by publicly owned hospitals, not just the public subsidy to those hospitals. Thus, U.S. state and local government health spending may be overstated in this table compared to other presentations, such as the national health expenditure data published by the Health Care Financing Administration.

b. Calculated prior to rounding.

c. Canadian figures have been converted to U.S. dollars using purchasing power parity currency conversion factors published by the Organization for Economic Cooperation and Development. For 1987, $1.23 CAN = $1.00 U.S

Sources: Health and Welfare Canada, *National Health Expenditures in Canada* 1975-1987 (Ottawa: Minister of Supply and Services Canada [forthcoming, 1990]), Table 69. (Final tables prepared for inclusion in this publication were supplied by the Health Information Division, Health and Welfare Canada. The 1987 figures are provisional.) U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:7 (July 1989) Government Printing Office), Tables 3.15 and 3.16.
For divisors used (GNP, population), see Appendix 2.

◆ Estimating the U.S. Cost

To estimate the cost of instituting a Canadian-type public health insurance system, the total cost is divided into two components: (1) the cost to the government of paying for services that previously were paid for by the private sector, and (2) the cost of financing additional health care services (beyond the charity or self-pay care they already receive) for those who currently have no coverage.

The first element represents not a new cost but a shift of current cost from the private sector to the public sector. One way of estimating the cost to the government of this shift is to apply the Canadian public-private allocation of health care costs to the U.S. context. About three-quarters (74 percent) of Canada's health expenditures were in the public sector in 1987, compared to only 42 percent of U.S. health expenditures in 1988. If the U.S. system had mimicked Canada's in this regard in 1988, roughly $402 billion to $407 billion of our total $540 billion in health expenditures would have been through the public sector — an increase of $174 billion to $179 billion over the $228 billion that was actually spent by the public sector that year (of which Medicare and Medicaid together accounted for about $146 billion).[10] This estimate, which was somewhat more sophisticated than this very simple description would suggest,[11] assumes 3 percent administrative cost on public sector personal health care expenditures (approximately the current Medicare figure).

The second element of covering the currently uninsured population represents new spending. An analysis done for the Health Care Financing Administration by Lewin/ICF estimates the order-of-magnitude increase in personal health care expenditures that might result from expanding health care coverage to the entire population as about $10.7 billion (in 1988 dollars).[12] Applying the same methodology as before, and again allowing 3 percent for administrative costs, produces an estimate of $9 billion to $10 billion in new costs to be paid by the (Canadian-style) public program.[13]

Combining these two elements suggests that implementing a Canadian-style public health insurance program would cost U.S.

taxpayers an additional $183 billion to $189 billion (in 1988 dollars). With health care expenditures growing at about 10 percent per year, the increase in 1991 dollars could be as much as $244 billion to $252 billion. The bulk of this figure represents a shift from private to public financing, rather than entirely new cost.

Some have suggested that implementing a Canadian-style public health insurance system would generate sufficient savings in administrative overhead to pay the costs of insuring those who now lack coverage.[14] In this view, savings are expected both from eliminating the administrative and marketing expenses of private insurance companies and from reducing the accounting and recordkeeping burden on providers. Savings also could result from reducing provider payment rates through the market power of a single large payer.

Moving to a public health insurance system administered exactly as the Canadian system is now (a probably unrealistic assumption in this country) would reduce overhead expenditures to administer private health coverage. The exact extent of the savings is difficult to estimate because, even in Canada, private health insurance continues to exist for services not covered by the public system (e.g., prescription drugs, dental care). In any event, such savings would not reduce the estimate of public costs presented above, because no overhead costs of private insurance companies were included in the base for that estimate.

Whether providers would realize significant reductions in administrative costs is a separate question. There would be modest savings in billing costs, of course. But the argument for significant savings in this area assumes virtually complete abandonment of any attempt to track costs incurred by individual patients (particularly in hospitals) or to review the appropriateness and necessity of care rendered to individual patients.[15] While it is true that Canada makes no such attempt (at least thus far), the variations in physicians' treatment decisions, the widespread knowledge that much unnecessary care is rendered and the history of oversight in the U.S. Medicare program make it unrealistic to assume that any publicly run insurance system in this country would agree to forego data on individual treatments and costs.

Whether provider payment rates could be reduced under a public insurance system is a broader question. Given the political consensus-building that would be necessary to implement government-run health insurance in this country, significant reductions at the outset seem highly unlikely.[16] The recent history of U.S. Medicare suggests that government would indeed try to restrict, perhaps severely, increases in provider payment rates over time. Analysis

Table 5.6
Estimated Increase to Implement Universal Public Health Insurance Compared to Current Government Revenue and Outlays, United States, 1988

	Current Receipts or Outlays ($ billion)	Est'd PHI Cost as a Percent of Each Item
Estimated Increase in Gov't Outlays due to Public Health Insurance		
– in 1991 dollars	$ 248	N/A
– in 1988 dollars	186	
Medicare and Medicaid Spending (federal and state combined; administrative costs estimated)	146	127 %
Defense Spending	298	62
Federal Income Taxes	404	46
FICA Payroll Taxes (Social Security & Medicare)	313	59
Total State Tax Receipts (fiscal 1988)	262	71

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:7 (July 1989) (Washington: U.S. Government Printing Office). Table 3.2 for defense spending and federal income tax receipts. Table 3.6 for FICA payroll tax receipts.
U.S. Health Care Financing Administration, Office of National Cost Estimates, 1988 national health expenditure estimates for the United States released May 3, 1990, by the U.S. Department of Health and Human Services. Administrative costs of 3 percent were added to total Medicare and Medicaid spending for personal health care expenditures shown in Table 3 of the press release.
Fiscal Survey of the States, March 1990 (Washington: National Association of State Budget Officers and National Governors' Association, 1990). For total state tax receipts.

of cost trends in Canada, presented in the previous chapter, suggests that such attempts are unlikely to curb the growth rate of overall health care costs.

◆ Estimating the Required Tax Increase

To calculate how much various taxes might have to be increased to fund public health insurance costs of this magnitude, the estimated cost was measured against actual tax receipts in 1988. Table 5.6 shows the percentage increase in total receipts required to fund the entire increase in government health spending from each of several taxes. Current Medicare/Medicaid and defense spending are also shown, for comparison purposes. (Because actual revenue and spending figures were available for 1988, the table compares them with the midpoint of the 1988 estimate of increased public expenditures for government-provided health insurance — $186 billion.)

Implementing universal government-provided health insurance would at least double current public spending on Medicare and Medicaid. If funded entirely at the federal level, it would require a 46 percent increase in income tax receipts, a 59 percent increase in payroll tax receipts, or a 62 percent reduction in defense spending. If funded entirely at the state level, it would require a 71 percent increase in overall state tax revenues.[17]

The notion that the entire additional cost of universal public health insurance might be funded from state rather than federal revenues may seem outrageous in the U.S. context, but it is in fact a literal application of the Canadian model. As has been noted, in Canada more than 74 percent of health expenditures are made by government, compared to 42 percent in the United States. But the Canadian federal government contributes only about 29.6 percent of total health expenditures, while the U.S. federal government already contributes about 29.2 percent.[18] A "pure" Canadian distribution of the fiscal burden, therefore, would place almost the entire new financial responsibility on the states. As noted in Chapter 1, continuing budget deficits have motivated the Canadian federal government to slow the growth of its contribution to provincial health plans over the past several years and to freeze the federal contribution at the 1989 per capita amount for the next two fiscal years (beginning April 1990). The U.S. parallels in an era of "no new (federal) taxes" are not hard to draw.

Chapter 6

The Wider Social Context

The record shows that public health insurance run by government has not enabled Canadians to escape rising health care costs or the access problems that seem inevitably to attend efforts to control costs. Even so, the Canadian system covers all Canadians, is enormously popular with the people it serves and has a number of supporters in the United States.

This final section stands back from cost and access comparisons to examine other differences between Canada and the United States that make it unlikely that this nation could adopt successfully such a system or live comfortably with it if it were adopted.

◆ Public Attitudes toward Government

Culturally, Americans and Canadians hold very different attitudes about the appropriate size and place of government. Canadians support government health and social welfare programs generally and typically believe that government can effectively and equitably manage major programs for the common good. Americans always have been suspicious of government control and skeptical of government's ability to operate programs effectively, and seem to be increasingly so. They dislike taxes intensely — to the point of having enacted tax limitation initiatives by popular referenda in several states, initiatives that are unknown in Canada. It seems unlikely that Americans would tolerate the substantial increases in both taxes and government responsibility that would be an inevitable part of public health insurance based on the Canadian model.

◆ Form of Government

Canada's parliamentary system of government, at both the federal and provincial levels, is a system with strong party discipline and a policymaking process that integrates the executive and legislative branches. This is in sharp contrast to the United States. Even so, the current Canadian financing system was not imposed overnight; rather, it grew incrementally over a period of 40 years or more, with many difficult political decision points along the way. It is unlikely that the American system of checks and balances would allow such a major change as universal public health insurance without a substantial shift in political attitudes and values.

It is also doubtful that the program would be financially stable if adopted. For example, some federal legislators have garnered special dispensations for hospitals in their districts under the U.S. Medicare program.[1] If the government program averaged 95 percent to 99 percent of a hospital's revenue, rather than the current 40 percent or so represented by Medicare, the incentive for providers to use political pressure to undercut cost-containment policies would be commensurately greater.

◆ Roles of Different Levels of Government

The Canadian division of responsibility and authority in health care financing reflects a balance of power between federal and provincial governments that differs significantly from the federal/state relationship in the United States. The provinces have much more autonomy than the states. They have much larger budgets per capita, a more pervasive role in the lives of their citizens and operate with considerably fewer federal legislative and regulatory constraints.

In Canada, administration of public health insurance is left to the provinces. Except for several very general conditions that provinces must meet to qualify for federal funding, federal administrative duties are limited to distributing the "block grant" funds and tracking the overall performance of the system. This is in sharp contrast to Medicaid, the U.S. health financing program for the poor, under which states are subject to an enormous number of federal requirements, both legislative and administrative, many of them quite picayune. States continually battle federal threats to withhold or deny matching funds for violation of one or another administrative requirement.

The relatively greater federal control and regulation of state participation in federal-state programs in the United States has broad implications for designing a publicly operated health insurance system. The strong provincial role in Canada overall assured that the public health insurance system would be administered at a level of government close enough to the people to be responsive to geographic differences in circumstances. Although the Canadian system is highly regulated, regulators are closer to the affected population and have at most hundreds rather than thousands of hospitals to deal with, as has the Medicare program in this country. Furthermore, Canadian provinces are very small; six have fewer people than Nevada, the tenth smallest state. Only Ontario and Quebec have large populations by U.S. standards, but even the largest (Ontario) has only one-third the population of California, and only 204 general hospitals, compared to 474 in California.[2]

A satisfactory administrative solution for government-run health insurance would be difficult to devise in the United States. Since health care is a local product, approaches that work (for both cost control and access) in local areas probably cannot be devised at the federal level. Persuading 50 states to adopt universal public insurance would be virtually impossible. It was difficult enough in Canada 20 years ago, with only 10 provinces and a much simpler health care system. Convincing the federal government to fund individual programs devised by the states would be just as difficult.

◆ Freedom of Choice

From the American point of view, a major defect of the Canadian health care system is the lack of choice not among specific doctors and hospitals but of overall delivery system and extent of coverage. Americans like choices, in health care as in other areas; and the current health insurance system allows a significant range of choice. If an employment-based group chooses to reduce its current outlays for insurance premiums and protect themselves only against very major medical bills, for example, they can buy lower cost insurance. Those who prefer comprehensive, first-dollar coverage can buy it at a higher cost. Those who want comprehensive coverage and are willing to make other concessions — longer waits for routine appointments, for example, or limitations on when they can see a specialist — can obtain this by enrolling at medium cost in an HMO.

These kinds of choices are not available to Canadian citizens. All must belong to the same system and accept its deficiencies as well as its benefits, unless they choose to be restricted to the very few private hospitals and physicians or seek care outside the country. Thus, if the government seeks to control costs by restricting the availability of hospital beds or new equipment, citizens needing care must either wait for service or pay privately to go outside the system.

◆ The Role of Innovation

Attempts to control costs in the Canadian system are based on the monopoly market power provincial governments have as sole payer for all hospital and physician care. The system is thus characterized by very tight, administered budgets, particularly for hospitals, which are the focal point of the health care system even more than they are in the United States. Because anything new represents an additional cost, such a system discourages innovation, perpetuates existing inefficiencies and leads to creeping obsolescence and service rationing. The much lower availability in Canada of cost-effective technologies such as lithotripsy testifies to this reality, as does the failure of provincial governments — at least until very recently — to support the development of free-standing ambulatory surgery facilities.

One strength of the American health care system is its ability to adapt to changing needs and to develop, and to bring rapidly on line, new and better ways of treating illness. Such responsiveness clearly is not possible when all major resource allocation decisions are made by a government, particularly a government concerned primarily with cost control.

◆ The Benefits of a Free-Market Neighbor

The Canadian health care system benefits from the presence of a free market health care system right next door for two reasons. First, Canadians need not spend large sums developing new medical technology — they can wait for the United States to develop it and reap the benefits when it is ready.

Second, the United States also relieves pressures that would otherwise build for expansion of the Canadian system and additional spending. For example, with few exceptions (e.g., cataract surgery), it is almost impossible for individuals to shorten their waiting periods for surgery within Canada because there are virtually no private hospitals; but Canadians who are willing and able to pay privately to obtain care sooner can come to U.S. hospitals and clinics. In a few recent instances in which long waiting lists had developed, particularly for heart surgery and lithotripsy (see Chapter 4), Canadian provinces even agreed to pay for surgery in U.S. hospitals to reduce the backlog. The provinces had no other short-term alternative for reducing surgical waiting lists. If the United States were to adopt the Canadian system, the safety valve would no longer exist for Canadians nor would there be one for Americans.

◆ Conclusion

Clearly, the United States must work to assure access to health care for all Americans. Equally clearly, we must do a better job of containing health care cost increases while maintaining quality of care. But public insurance on the Canadian model does not seem to be an approach that would work well in the United States.

First, Canada has not solved the problem of escalating costs. Canada spends a smaller percentage of GNP on health care than the United States primarily because its economy grew faster than ours over the past 20 years. Per capita health care costs are growing just as fast in Canada as in the United States and access problems are emerging. Second, although all Canadians have health insurance coverage, universal coverage has led to a substantially larger public sector, a substantially higher tax burden and a rigid, less innovative system. Finally, the Canadian system removes choice of financing and delivery systems from the consumer. Consumers must accept the system as it is; they cannot choose the degree or type of coverage.

There are substantial advantages to approaching health care reform in the United States by building on the strengths of the existing employer-based private system. The private market provides a direct incentive to respond to client needs, to develop and continually refine innovative health financing structures that will meet demands for quality health care at an affordable price. The private market is not subject to the procedural requirements and decision-making rigidity that are an inevitable part of government and that are exacerbated the more removed the level of government from the people who use the services. (The sheer size of the U.S. population compared to Canada makes the latter a significant factor.) For example, legal requirements make it impossible, for all practical purposes, for government to develop effective managed care systems based on selection of efficient physicians and hospitals, as private insurers are aggressively beginning to do.

The U.S. private market is responding to the growing demand for cost containment and quality assurance and is moving aggressively to implement and improve managed care systems that will meet this dual need. Private insurers also recognize the need for universal availability of health care coverage and have developed specific proposals to make coverage available to a broad spectrum of Americans who currently are without it.

It would be a mistake to let the yearning for the chimera of a simple solution to complicated health care problems lead us to adopt public insurance based on the Canadian model and not apply the American talent for flexibility and innovation.

Notes and References

Executive Summary

1. As used in this *Research Bulletin*, "real" means after discounting for general inflation as measured by the implicit price deflator for gross national product.

Introduction

1. R.G. Evans et al., "Controlling Health Expenditures: The Canadian Reality," *The New England Journal of Medicine* 320:9 (March 2, 1989), pp.571-577.
2. D.U. Himmelstein, S. Woolhandler and the Writing Committee of the Working Group on Program Design, "A National Health Program for the United States," *The New England Journal of Medicine* 320:2 (January 12, 1989), pp.102-108.
3. Academic Consortium of Michigan, "Michigan Health Plan: Universal Health Security," Report to the Governor's Task Force on Access to Health Care, September 1, 1989. The Task Force declined, by a narrow vote, to recommend the plan. (Peter Luke, "State Universal Health Insurance Rejected," *The Ann Arbor News*, September 15, 1989, p.A1)
4. New York State Department of Health, "UNY*Care: Universal New York Health Care: A Proposal," September 1, 1989.
5. Ohio House of Representatives, 118th General Assembly, H.B.425, "A Bill ... to provide for the establishment and operation of the Ohio Universal Health Plan." Hearings have been held, but no vote has been taken.
6. H.B. 2252, the Washington Health Access and Cost Containment Act, passed the Washington State House of Representatives in 1990 but died in the State Senate.
7. Robert J. Blendon, "Three Systems: A Comparative Survey," *Health Management Quarterly* 11:1 (First Quarter 1989), pp.2-10.
8. Unpublished data from HIAA's 1989 *Monitoring Attitudes of the Public* survey. In both the Blendon and HIAA studies, 37 percent of Americans said they preferred the U.S. health care system over the Canadian system. There were many more "undecided" respondents in the HIAA study.
9. Unpublished data from HIAA's 1989 *Monitoring Attitudes of the Public* survey.

Chapter 1

1. Except as otherwise noted, the historical facts presented in this chapter are taken from two works by Malcolm G. Taylor:

   M.G. Taylor, *Health Insurance and Canadian Public Policy: The Seven Decisions That Created the Canadian Health Insurance System and Their Outcomes*, 2nd ed. (Kingston, Ontario: McGill-Queen's University Press, 1987).

   M.G. Taylor, "The Canadian Health Care System 1974-1984," in Robert G. Evans and Greg L. Stoddart (eds.), *Medicare at Maturity: Achievements, Lessons & Challenges* (Calgary, Alberta: The University of Calgary Press, 1986), pp.3-39.

2. Only half of the federal contribution to each province was based on that province's own spending level. The other half was based on the national average per capita spending for insured hospital services. Thus, high-cost provinces received a little less than half their costs, while low-cost provinces received a little more than half. Taylor, *op.cit.* (1986), p.5.

3. This time, funding was based on 50 percent of national per capita costs, multiplied by the number of insured persons in the province. There was no adjustment for provincial per capita costs. Ibid., p.7.

4. The analogy to what Americans would call a block grant is not exact. In the United States, block grants have not been used to support state programs under which individuals are entitled to receive services. Proposals in the early 1980s to "cap" the federal contribution to Medicaid, for example, were strongly and successfully opposed by the states.

5. The financing arrangement actually involves a combination of a direct cash grant and a transfer of tax points to the provinces, i.e., a reduction in federal income taxes (individual and corporate) to allow provinces to raise their own taxes. Both parts are still counted as part of the federal contribution. For a discussion, see Taylor, *op.cit.* (1986), pp.12-15. This fact becomes significant when the federal contribution is reduced. (See note 9 below.)

6. Beginning in 1986, two percentage points were subtracted from the average three-year nominal growth in GNP to determine the escalator. A third percentage point was subtracted from the escalator for the 1989-90 fiscal year. (Personal communication from J. Bruce Davis, Director, Program Administration, Health Insurance Directorate, Department of National Health and Welfare, Government of Canada.)

7. Author's calculation from Health and Welfare Canada, *National Health Expenditures in Canada 1975-1987* (Ottawa: Minister of Supply and Services Canada, forthcoming, 1990), Table 69. Final tables prepared for inclusion in this publication were supplied by the Health Information Division, Health and Welfare Canada. The 1987 figure is provisional.

8. The Canadian federal government uses an April to March fiscal year.

9. "The Budget Tabled in the House of Commons by the Honorable Michael H. Wilson, Minister of Finance, February 20, 1990." The budget document promises that, beginning in 1992-93, the growth of the total transfer to the provinces will not fall below the rate of inflation. This is interpreted to apply to the total amount of the transfer, not the per capita amount. (J. Bruce Davis, personal communication.) See also "Canada Presents Austerity Budget," *The New York Times*, February 21, 1990.

   In this context, it is significant that the federal contribution to health care consists of both a direct cash payment and a transfer of tax points. Increases in the nominal value of the tax points transferred are virtually guaranteed as personal and corporate incomes increase. Therefore, when the growth of the overall federal contribution is slowed or halted, the reduction falls primarily on the federal cash transfer to the provinces. For 1989-90, the $14.1 billion federal transfer included $7.2 billion in "tax points" and $6.9 billion in direct cash payments. For 1990-91, with the freeze in effect, the $14.2 billion federal transfer will include $7.6 billion in tax points but only $6.6 billion in direct cash payments. (Dollar amounts from J. Bruce Davis, personal communication, but the interpretation is the author's own.) A recent newspaper column points out that, if this trend continues, the federal government will, in the foreseeable future, make no direct cash payment for health care to any of the provinces. (Frances Russell, "Ottawa Is Killing Medicare, Quietly and Deliberately," *The Winnipeg Free Press*, January 13, 1990.)

10. Taylor, *op.cit.* (1986), pp.15-16.

11. Quoted by Taylor, *op.cit.* (1987), p.432.

12. Task force recommendation as paraphrased by Taylor, *op.cit.* (1987), p.432.

13. Extra billing, usually called balance billing in the United States, occurs when the physician refuses to accept the official provincial fee schedule as full payment and bills the patient for the difference between his full charge and the plan's reimbursement.

14. Opting out is analogous to refusing to accept assignment of a claim in the United States, except that it generally means the physician *always* bills the

patient and *never* the provincial plan. Before the Canada Health Act, some provinces permitted extra billing only if the physician opted out. Taylor, *op.cit.* (1987), pp.437 and 449.

15. The estimate of total extra billing charges is from Health and Welfare Canada, as cited in Taylor, *op.cit.* (1987), p.437.

16. Canada Health Act, R.S., 1985, c. C-6, Office Consolidation (Ottawa: Minister of Supply and Services Canada, 1989).

17. A few charges are still permitted. Patients pay out of pocket for noncovered physicians' services such as employment physicals. Hospital patients in chronic care are required to pay a room-and-board charge equivalent to what they would pay if they were in a nursing home.

18. Ontario recently eliminated its health insurance premium, effective January 1, 1990; a payroll tax was substituted. The two provinces now charging premiums are Alberta and British Columbia. (American Hospital Association, Office of Public Policy Analysis, "The Canadian Option: Background Information on Health Care in Canada and the United States," A Special Briefing for Members, February 12, 1990, pp.7-8.)

19. "Across Canada at a Glance," Canadian Life and Health Insurance Association *Quarterly Review* 4:2 (1988).

20. In some provinces there is a legal prohibition against selling such insurance. In others, the provincial plan is the primary insurer and supplemental insurance may exist provided that the resident does not receive duplicate reimbursement. (*Ibid.*) John Iglehart notes that Canada is alone among industrialized nations in not looking toward private funding to relieve pressure on tax-financed programs. "What is unique to Canada is the virtual absence of private-sector involvement in health insurance and the unwillingness of policy makers to encourage the development of such alternatives, which could ease the financial pressure on the provincial health plans." (J.K. Iglehart, "Health Policy Report: Canada's Health Care System Faces Its Problems," *The New England Journal of Medicine* 322:8 [February 22, 1990], p.562.)

21. Draft "Fact Sheet" on Canadian and U.S. health care systems obtained from J. Bruce Davis, Health and Welfare Canada.

22. Ralph W. Sutherland and M. Jane Fulton, *Health Care in Canada: A Description and Analysis of Canadian Health Services* (Ottawa: The Canadian Public Health Association, 1988), p.65.

23. Personal communication from Charles Black, Canadian Life and Health Insurance Association, November 17, 1989.

24. Calculation based on Health and Welfare Canada, *op.cit.*, Table 69.

Chapter 2

1. *Canadian Hospital Directory 1988* (Ottawa: Canadian Hospital Association, 1988), Table 1, p.197.

2. There are also 49 federal hospitals that serve the Department of Veterans Affairs, Health and Welfare Canada (Medical Services and Immigration Medical Services), Industrial (crown corporations), the Department of National Defence, and correctional facilities. *Ibid.*

3. Renaldo N. Battista, Robert A. Spasoff and Walter O. Spitzer, "Choice of Technique: Patterns of Medical Practices," in Evans and Stoddart (eds.), *op.cit.*, p.194.

4. Calculation based on *Canadian Hospital Directory*, 1988, Table 1, p.197.

5. J.P. Newhouse, G. Anderson and L.L. Roos. "Hospital Spending in the United States and Canada," *Health Affairs* 7:5 (Winter 1988), Exhibit 6, p.15. The Manitoba data exclude stays in personal care units, geriatrics and extended treatment hospitals. The Ontario data exclude patients in rehabilitation and long-term units.

6. "Pure" nonparticipation exists only in Quebec. In 1988-89, 45 physicians were not participating. Personal communication from L.W. Rehmer, Director, Health Information Division, Health and Welfare Canada, March 8, 1990. Mr. Rehmer was "under the impression that non-participation was more common among physicians who provided few, if any, insured services, e.g., cosmetic surgeons."

7. See the notes to Table 2.2 for a discussion of definitional factors affecting this comparison.

8. Canadian physicians are considered specialists only if they have been properly certified by the appropriate organization; all others are classified as general practitioners. In the United States, licensed physicians may practice any specialty. U.S. figures on type of practice are based on physicians' "self-designated practice specialty" — the specialty in which they spend most of their practice time — as reported in the American Medical Association's annual survey (note 10, below).

9. Calculation based on Health and Welfare Canada, *Health Personnel in Canada 1987* (Ottawa: Minister of Supply and Services Canada, 1988), Table 21.11. For this calculation, interns and residents were excluded from the count of total physicians. If they are included in the base but not counted as general or family practitioners, the figure falls to 44 percent.

10. Doctors of medicine only. Calculation based on G. Roback et al., *Physician Characteristics and Distribution in the U.S., 1987 Edition* (Chicago:

American Medical Association, 1988), Table B-12. Counts of medical doctors by "self-designated practice specialty" were used exactly as given in the AMA table. For the denominator, the count of total physicians (medical doctors) reported by the AMA was reduced by excluding physicians known to be inactive or with unknown addresses. For consistency with the Canadian data, medical doctors not classified by activity status were included in the total. Interns and residents are included in both figures because we could not separate them using the data available to us.

The figures on total physician supply shown in Table 2.2 include doctors of osteopathy in the count of active physicians. If these physicians are considered general practitioners and are included in the total, the proportion of U.S. physicians considered to be general or family practitioners rises to 16.7 percent. The estimate of active doctors of osteopathy is from National Center for Health Statistics, *Health United States 1988* (Department of Health and Human Services Pub. No. (PHS) 89-1232, Public Health Service, Washington: U.S. Government Printing Office, March 1989), Table 82.

11. M.G. Taylor, H.M. Stevenson and A.P. Williams, "Medical Perspectives on Medicare: Attitudes of Canadian Physicians to Policies and Problems of the Medical Care Insurance Program" (Toronto: York University, 1984), special computer run on numbers of physicians in group and solo practice, as reported in John E.F. Hastings and Eugene Vayda, "Health Services Organization and Delivery: Promise and Reality," in Evans and Stoddart (eds.), *op.cit.*, p.348.

12. William D. Marder, David W. Emmons, Phillip R. Kletke, and Richard J. Willke, "[DataWatch] Physician Employment Patterns: Challenging Conventional Wisdom," *Health Affairs* 7:5 (Winter 1988), Exhibit 2, p.140.

13. Sutherland and Fulton, *op.cit.*, p.225.

14. Many patients don't even know that they are participating in an HSO as medical care is essentially free regardless of where they obtain care. This discussion of the general structure of HSOs relies on a personal communication from Catherine Fooks, Centre for Health Economics and Policy Analysis, McMaster University. HSOs also are mentioned briefly in Sutherland and Fulton, *op.cit.*, pp.221 and 225.

15. J. Abelson and J. Lomas, "Do Health Service Organizations and Community Health Centres Have Higher Disease Prevention and Health Promotion Activity Levels Than Fee-For-Service Practices?" Working Paper Series #21 (Centre for Health Economics and Policy Analysis, McMaster University, Hamilton, Ontario, September 1989). See also S. Birch et al., "HSO Performance: A Critical Appraisal of the Current Research Findings" (Centre for

Health Economics and Policy Analysis, McMaster University, Hamilton, Ontario, August 1989).

16. This discussion of the structure of CHCs in Ontario relies on a personal communication from Catherine Fooks, Centre for Health Economics and Policy Analysis, McMaster University. The CHC concept and its history in Canada more generally are discussed in Sutherland and Fulton, *op.cit.*, pp.220-225, and in Hastings and Vayda, *op.cit.*, pp.340-358.

17. Derek Nelson, "Latest health-care remedy may not work either," *The Examiner*, Peterborough, Ontario, April 16, 1989.

18. J. Lomas and M.L. Barer, "And Who Shall Represent the Public Interest? The Legacy of Canadian Health Manpower Policy," in Evans and Stoddart (eds.), *op.cit.*, pp.242 and 263.

19. *Ibid.*, p.242.

20. Private clinics charge $900 for cataract surgery in Toronto and Calgary. (Thomas Walkom, "More Private Clinics Coming," *The Toronto Star*, September 9, 1989. Dorothy Lipovenko, "Need Surgery, Medical Tests? Go to the End of the Line," *The Globe and Mail*, Toronto, May 28, 1988.) $1,200 for services at a Toronto reproductive clinic. ("Caplan's Nascent Plan on Health Clinics Faces a Pregnancy Test," *The Globe and Mail*, Toronto, September 6, 1989.)

21. Ontario's Independent Health Facilities Act (Bill 147), introduced last year by the Liberal government and enacted by the provincial legislature in November 1989, gives the province "the right to license clinics outside of hospitals to perform operations — such as cataract surgery — that do not require an overnight stay." When the law goes into effect, the 20 or so existing outpatient surgery clinics in the province will be able to apply for a license without competition, although new clinics will be allowed to do so only after an official determination that a need exists and a competition to select the "most suitable" applicant. The legislation will also affect approximately 300 radiology and ultrasound clinics in the province. The content of the bill is described in *The Toronto Sun*, September 9, 1989. (See also 1989 sources in note 20.) Its enactment was noted in *The Hamilton Spectator*, November 23, 1989 (Emilia Casella, "Grits Pass Thorny Health Clinic Bill").

Chapter 3

1. Health and Welfare Canada, *National Health Expenditures in Canada 1975-1987*, Table 9. Calculations are based on revised national health expenditure estimates for the United States for 1987 obtained from the Office of National Cost Estimates, Health Care Financing Administration (personal

communication, May 4, 1990.) In 1988, the percentage of U.S. national health expenditures accounted for by hospitals fell to 39.2 percent, identical to the 1987 figure for Canada. (Calculation is based on 1988 national health expenditure estimates for the United States released May 3, 1990, by the U.S. Department of Health and Human Services.)

2. The term global is used in Canada to distinguish this form of budget negotiation from an earlier form in which individual budget line items were negotiated.

3. Health and Welfare Canada, Health Services and Promotion Branch, Health Insurance Directorate, Program Analysis Division, "Notes on Hospital Financing in Canada," March 26, 1987.

4. Michael Rachlis, M.D., and Carol Kushner, *Second Opinion: What's Wrong with Canada's Health Care System and How to Fix It* (Toronto: Harper & Collins Publishers Ltd., 1989), p.45.

5. For example, 75 beds closed for 10 to 12 weeks at one 320-bed hospital in Newfoundland (*The Globe and Mail*, May 28, 1988); 405 beds closed over the summer in Newfoundland (*The Evening Telegram*, St. John's, June 28, 1989); 68 beds closed in June for 3 months to balance a Manitoba hospital's budget, leaving 91 patients waiting up to 6 weeks for urgent surgery (*Winnipeg Free Press*, Manitoba, July 5, 1989); 300 beds closed in New Brunswick (MacLean's, February 13, 1989).

6. Health and Welfare Canada, "Notes on Hospital Financing in Canada," March 26, 1987. The hospital share is most often provided by special fund-raising drives in the local community, although bonds and other methods also are used. Only some of the provinces pay hospitals a depreciation allowance. Health and Welfare Canada also notes that some provinces have been modifying their hospital reimbursement and financing systems to provide more income for capital purposes. Ontario, for example, allows hospitals to retain for capital purposes earnings from higher preferred-accommodation rates and chronic-care copayment charges.

7. *Ibid.*

8. One might ask why physicians do not simply open their own ambulatory-surgery centers or outpatient diagnostic facilities to avoid hospital restrictions and queues. The answer is that the provincial health plans will pay physicians for their own professional services only. Any additional charge for use of an operating room or of specific equipment will not be reimbursed unless the facility has a province-approved operating budget, as noted in Chapter 2.

9. On January 25, 1990, the Ontario Government announced plans to set up five new magnetic resonance imaging centers. (Personal communication from J. Bruce Davis, Director, Program Administration, Health Insurance Directorate, Department of National Health and Welfare, Government of Canada.)

10. In the United States, even the notion of adopting a standard fee schedule for Medicare has been controversial, in part because it puts government in the role of explicitly comparing the value of services provided by different specialties. Canada's provinces did not have to fight that basic battle. Prior to the conversion to public insurance, all provinces had operating private, voluntary medical insurance plans sponsored (or at least endorsed) by the provincial medical associations. Such insurance was also offered by commercial carriers. As the provinces implemented their public plans (between 1968 and 1971), they simply adopted the fee schedules that had been used by the physician-sponsored plans, usually discounting them (up to 15 percent) to account for elimination of charity care and unpaid bills. The internal battles among different groups of physicians already had been fought out and resolved.

11. M.L. Barer, R.G. Evans and R.J. Labelle, "Fee Controls as Cost Control: Tales from the Frozen North," *Milbank Quarterly* 66:1 (1988), Table A3, p.51. In the comparison quoted here, inflation is measured by the GNP deflator applicable to each country. If inflation is measured by the consumer price index, the comparison becomes +15.6 percent for U.S. physician fees versus -15.9 percent for Canadian physician fees over the 1971 to 1985 period. It is perhaps useful to note that, in Canada, physician fees fell most rapidly (in comparison with general price levels) in the early years of universal health insurance, 1971 to 1976. Thereafter, physician fees roughly kept pace with inflation through 1982 and grew slightly faster than general inflation in 1983 and 1984. U.S. physician fees fell behind general inflation from 1971 to 1974 (reflecting the impact of economy-wide price controls), then resumed their normal growth pattern.

12. Jean-Pierre Poullier, "Health Care Expenditure and Other Data: An International Compendium from the Organization for Economic Cooperation and Development," *Health Care Financing Review*, 1989 Annual Supplement, Table 14, p.134. The conversion from Canadian to U.S. dollars was made using the OECD's purchasing power parity for 1987: $1.23 CAN = $1.00 U.S. (*Ibid.*, Table 67, p.194).

13. Calculations are based on Health and Welfare Canada, *National Health Expenditures in Canada 1975-1987*, Table 69, and revised national health expenditure estimates for the United States for 1987 obtained from the

Office of National Cost Estimates, Health Care Financing Administration (personal communication, May 4, 1990), together with population figures from Appendix 2.

14. These technical issues include: First, as noted in Table 3.2, the fee differential for office visits, the most common medical procedure, is not as large as for surgical procedures. Second, because Canadian physicians operate under a fee schedule, the Ontario fees shown in Table 3.2 represent amounts actually paid by the provincial health plan. The U.S. figures, on the other hand, represent average amounts billed by physicians. Most U.S. health insurers, public and private, base their payments on "usual, customary and reasonable" (UCR) fee levels and will not recognize charges that exceed their established standards. Actual payments are therefore lower than billed charges would imply. Third, U.S. physicians probably raise their fees both to cover uncollectible accounts and to encourage insurers to establish higher UCR screens in subsequent years.

15. Some economists argue that increasing the number of suppliers will reduce prices through competition. Whatever the merits of that argument in a pluralistic system, it clearly has no applicability to the Canadian system, in which the sole payer offers to pay the same price to any willing supplier and in which there is no charge whatsoever to the actual purchaser at the point of purchase.

16. Barer, Evans and Labelle, *op.cit*, Table A3, p.51.

17. *Ibid.* To examine utilization per physician, Barer, Evans and Labelle divided total physician expenditures by the number of physicians and by an index of physician fees (using the physician fee component of the CPI for the United States and a weighted average of provincial fee schedules for Canada).

18. For example, according to HIAA's 1989 Employer Survey, a national sample survey of employers, 73 percent of employer-sponsored conventional health benefit plans require preadmission certification of elective hospital admissions; the figure rises to 85 percent for PPO plans. Jon Gabel et al., "Employer-Sponsored Health Insurance, 1989," *Health Affairs* (forthcoming, Fall 1990).

19. J. Lomas et al., "Paying Physicians in Canada: Minding Our Ps and Qs," *Health Affairs* 8:1 (Spring 1989), pp.80-102. The entire discussion of expenditure caps and targets relies on this source unless otherwise noted.

20. Barer, Evans and Labelle, *op.cit*, p.23.

21. See, e.g., M.L. Barer, "Regulating Physician Supply: The Evolution of British Columbia's Bill 41," *Journal of Health Politics, Policy and Law* 13:1 (Spring 1988), pp.21-22, noting several Canadian and American sources on this issue.
22. Sutherland and Fulton, *op.cit*, pp.70-72.
23. The following discussion of the British Columbia attempt to restrict billing numbers relies entirely on Barer, *op.cit*

Chapter 4

1. Quality of care is obviously the other major consideration, but the science of measuring quality is in its infancy. We are just beginning to learn how we might compare outcomes of care across hospitals. Collecting the volumes of data that would be necessary for a reasonably valid cross-national comparison of medical outcomes is a task that no one yet has attempted. Even if data were available, it would be difficult to prove that any observed differences in outcomes were due to differences in financing mechanisms. The gross health status measures that are available — primarily infant mortality and life expectancy at birth — favor Canada. (For a comparison of the United States with Canada and several European countries, see American Medical Association, Center for Health Policy Research, "Chartbook of Cross-National Health Care Comparisons: Demographics, Expenditures, Utilization and Resources," December 1989.) These measures are so influenced by factors other than the quality of medical care, however, that they can shed little light on that issue.
2. Gross domestic product (GDP) measures the total value of production originating within the geographic boundaries of the country, regardless of whether the factors of production are owned by residents or nonresidents. Gross national product (GNP) measures income received by resident factors of production, regardless of where the production takes place. GNP is used here to measure total economic output because the United States traditionally has kept its national accounts in this form and it is therefore familiar to American readers. Using GDP as the basis, as is usually done for international comparisons, would change the apparent differences between the United States and Canada only slightly. In Canada, GDP exceeds GNP by about 3 percentage points. In the United States the reverse is true: GNP exceeds GDP by about 1 percentage point.
3. The U.S. figure for 1987, recently revised downward, is 10.80 percent of GNP. If GDP is used to measure total economic output instead of GNP, the figures are 8.71 percent for Canada (1987) versus 10.88 percent (1987) and 11.14 percent (1988) for the United States. The basic data used in this section and the sources thereof are documented in Appendix 2.

4. Per capita health spending is defined as total national health expenditures divided by total population (including armed forces).

5. The conversion to U.S. dollars was made using the OECD's purchasing power parity currency conversion factor for 1987: $1.23 CAN = $1.00 U.S. The OECD defines purchasing power parity (PPP) as "Rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus, PPPs are the rates of currency conversion which eliminate differences in price levels between countries." *National Income and Expenditure Accounts, Volume 1* (Paris: Organization for Economic Cooperation and Development). The Canadian per capita health spending figure given here is slightly higher than the figure ($1,483) reported in other recently published work (see note 12, below) because more recent revised estimates of total Canadian health spending and population were obtained from Health and Welfare Canada. The U.S. per capita health spending figure given here is higher than the figure ($1,941 in 1987) published by the Office of National Cost Estimates, U.S. Health Care Financing Administration (May 3, 1990, press release from U.S. Department of Health and Human Services), because population figures from the U.S. Census Bureau were used rather than the higher Social Security Administration population estimates used by HCFA. The U.S. per capita figure is lower than the one shown by Schieber and Poullier (note 12, below) because a new revision of the U.S. national health expenditures totals was used, as shown in Appendix 2.

6. Throughout this *Research Bulletin*, "average annual rates" are calculated as annual compound growth rates (ACGR), rather than as the average of the observed yearly growth rates. The ACGR is the single annual growth rate which, if it had been the actual rate for each year during the period in question, would have produced the same total growth over the entire period.

7. The conversion to constant 1981 dollars was made by dividing health care spending by the GNP implicit price deflator for the United States and by the GDP implicit price deflator for Canada, both indexed such that 1981=1.0. See Appendix 2 for data used and sources.

8. The conversion to U.S. dollars was made using the OECD's purchasing power parity for 1981: $1.18 CAN = $1.00 U.S. Robert Evans suggested this two-step approach to comparing growth rates between countries (first convert to constant dollars within each country, then convert currencies using the PPP for the "constant dollar" year). R.G. Evans, "Perspectives: Canada — Split Vision: Interpreting Cross-Border Differences in Health Spending," *Health Affairs* 7:5 (Winter 1988), pp.17-24.

9. Evans et al., *op.cit.*

10. Saskatchewan pioneered in 1962, but no other province adopted a universal public program until 1968.

11. The Office of National Cost Estimates, U.S. Health Care Financing Administration, recently completed a thorough revision of the U.S. national health expenditure series from 1960 through 1987. (Appendix 2 has the revised figures, and the analysis here is based on them.) The revision lowered the 1987 U.S. health spending total significantly–to about $11.5 billion below the previously published figure. If the previously published figures for 1977 and 1987 are used, the U.S. average annual growth rate for the 10-year period becomes 4.31 percent, almost indistinguishable from the Canadian figure. For the 1978 to 1988 period, the U.S. average annual growth rate is 4.15 percent. Canadian figures for 1988 are not yet available.

12. The number of U.S. residents without health care coverage increased from about 26 million in 1977 to over 31 million in 1987. (Estimates range from 31 million to 37 million, depending on which data source is being used). Essentially all residents of Canada were covered under the provincial health insurance plans in both years. People who lack health care coverage use fewer services than people who have coverage. Therefore, it could be argued that the rate of increase in U.S. health care costs over the 1977 to 1987 period would have been higher if the number of uncovered people had remained the same.

    To remove the effects of changes in the number of uninsured U.S. residents from the calculation of the growth rate of health care costs, we re-estimated U.S. health care spending in both 1977 and 1987 under the assumption that all Americans had health care coverage, and then re-calculated the annual compound growth rate over the 1977 to 1987 period. These calculations produced a revised U.S. average growth rate of 4.42 percent per year — about one-half of one percent higher than actually observed and still very close to the Canadian growth rate. Thus, the 1977 to 1987 increase in the number of Americans without health care coverage slowed the growth of health care costs only slightly. Details of this calculation are available upon request.

13. G.J. Schieber and J-P. Poullier, "[DataWatch] International Health Care Expenditure Trends: 1987," *Health Affairs* 8:3 (Fall 1989), pp.169-181. This article was published before the latest U.S. and Canadian national health expenditure data became available. Therefore, the article underestimates Canadian spending and overestimates U.S. spending.

14. Evans et al., *op.cit.*

15. Calculations are based on figures given in Appendix 2.

16. See, e.g., Rachlis and Kushner, *op.cit.*

17. The *Ontario* Premier's Council on Health Strategy reported early in 1989, calling for a cap on annual payments to physicians. (Derek Ferguson, "Cap Urged on Fees Paid to Doctors," *The Toronto Star*, May 23, 1989.)

    New Brunswick's Commission on Selected Health Care Programs produced "64 wide-ranging recommendations on how the government could control the cost of medical care . . ." (Robert Jones, "Supply of Doctors Must Be Checked, New Brunswick Task Force Reports," *The Globe and Mail*, Toronto, August 25, 1989.)

    "After more than two years of research and public hearings, *Nova Scotia*'s Royal Commission on Health Care released its report [in December 1989]." (Beverley Ware, "The Key to Controlling Health Costs," *The Daily News*, Halifax, Nova Scotia, December 24, 1989.)

    A report from the Premier's Commission on Future Health Care for *Albertans* was submitted in late December 1989 and was to be made public in February 1990. (Karen Sherlock, "Health-Care Task Force Hands in Its Report," *The Edmonton Journal*, December 30, 1989.)

    British Columbia recently has established a "$2-million royal commission ... to consider the dramatic restructuring of British Columbia's health services into independent, regional 'comprehensive health organizations' . . ." (Deborah Wilson, "B.C. Commission to Study Health-Care Alternatives," *The Globe and Mail*, Toronto, February 23, 1990.)

18. A recent exception is a study of hospital use by elderly patients with cardiovascular disease. (Geoffrey M. Anderson, M.D., Ph.D., Joseph P. Newhouse, Ph.D., and Leslie L. Roos, Ph.D., "Hospital Care for Elderly Patients with Diseases of the Circulatory System," *The New England Journal of Medicine* 321:21 [November 23, 1989], pp.1443-1448.) Comparing national data from the U.S. Medicare program with provincial data from Ontario and Manitoba, the researchers found very similar discharge rates for nonsurgical treatment of elderly patients with cardiovascular disease (defined as patients with diagnoses in Major Diagnostic Category 5 — diseases and disorders of the circulatory system) in both 1981 and 1985. Discharge rates for *surgical* treatment of cardiovascular problems, however, increased significantly from 1981 to 1985 in both countries: by 10 percent in Canada and 64 percent in the United States, raising the U.S. rate from 81 percent to 121 percent of the Canadian rate. In 1985, the most significant difference between the two countries was the discharge rate for coronary-bypass surgery: the U.S. rate was 2.3 times the Canadian rate. This result may explain the prominence of bypass surgery in Canadian press reports about waiting lists. The researchers, however, were unable to assess the appropriateness or relative benefit of surgical interventions in either country.

19. For example, overcrowding and resultant problems in providing needed emergency care have been reported in many U.S. cities. Critics of the American health care system discount the relevance of Canadian media reports about waiting lists and delays in treatment. For example, David West, director of a consumer organization called Washington Fair Share, has been quoted as follows: "Much of the opposition to this plan [to establish Canadian-style public health insurance in the State of Washington] is in the form of anecdotes various people have heard about the Canadian system. What these stories ignore is the fact that someone not getting treatment is front-page news in Canada while the horror stories of being uninsured in America happen all the time." (Alicia Priest, "Dose of B.C. Touted as Cure," *The Vancouver Sun*, January 31, 1990.)

20. Washington State Hospital Association *Weekly Report* 15:8 (February 23, 1989). Howard Kim, "Canada Tabs Wash. Hospital," *Modern Healthcare*, March 26, 1990. "[For the Record] Second Seattle Hospital Gets Canadian Contract," *Modern Healthcare*, April 2, 1990, p.13.

21. Carol Goodwin, "U.S. 'Miracle Workers' Take Pay Cuts to Help Canadians," *The Kitchener-Waterloo (Ontario) Record*, February 15, 1990.

22. Karen Sherlock, "Detroit Offers Short Wait for Heart Surgery. Provincial Insurance Covers Bill," *The Edmonton Journal*, January 6, 1990.

23. Information for the first five months of 1989. (American Hospital Association, *op.cit.*, p.16.) A U.S. physician at a treatment center associated with Buffalo General also reports that 40 percent to 45 percent of his patients are Canadians. (Suzanne Morrison, "Lack of Lithotripter Sends Health Cash to U.S.: Patient," *The Hamilton (Ontario) Spectator*, December 21, 1989.)

24. Schieber and Poullier, *op.cit.*

25. See, for example, remarks by the Ontario Medical Association's director of professional affairs, Dr. David Peachey, quoted in the St. Catherine's (Ontario) *Standard*, April 21, 1989.

26. See, for example, remarks by the chief of emergency medicine at a Toronto hospital and by the president of the Quebec Corporation of Physicians in *MacLean's*, February 13, 1989, p.35.

27. Only Alberta and British Columbia charge premiums, and these premiums never cover more than a minor portion of total costs. In Alberta, the premiums often are paid by employers. British Columbia does bill all residents directly. American Hospital Association, *op.cit.*, p.8.

28. Michael A. Walker, "Neighborly Advice on Health Care," *The Wall Street Journal*, June 8, 1988, p.24.

29. The House Wednesday Group, "Public Health in the Provinces: Canadian National Health Insurance Strategy," (Washington: Congress of the United States, September 22, 1989), p.5. The paper cites Robert Evans as the source of this observation. (R.G. Evans, "The Welfare Economics of Public Health Insurance: Theory and Canadian Practice," in Lars Soderstrom (ed.), *Social Insurance* (New York: North-Holland, 1983), p.83.)

30. The House Wednesday Group, *op.cit.*, p.19. The paper cites *The Ottawa Citizen* ("Canada's Costly Health Care System: A Suitable Case for Privatization?" February 15, 1986, p.A1).

31. Derek Nelson, "Latest Health-Care Remedy May not Work Either," *The Examiner*, Peterborough, Ontario, April 16, 1989. "Quebec Sets Detailed Plans to Become First Province to Use HMOs," *The Medical Post* (magazine), Toronto, Ontario, March 21, 1989. OSI is the acronym for "integrated health-care organization" in French.

32. *The Toronto Star*, May 23, 1989.

33. Pat Rich, "'Pay for Job Done': Days of Fee-for-Service May Be Over, CMA Told," *The Medical Post* (magazine), Toronto, Ontario, March 21, 1989.

34. William Johnson, "Health Care Needs Competition?" *The Windsor Star*, February 8, 1990. Castonguay was the Quebec minister responsible for health care from 1970 to 1973 after heading a four-year royal commission on health care in the 1960s.

Chapter 5

1. All figures in this section are given on a National Income and Products Accounts (NIPA) basis, so figures may differ from presentations based on government budgets. In particular, investment income and interest earned by government are not counted in government receipts; instead, they are netted against expenditures. Figures for 1987 are used throughout because it is the most recent year for which both NIPA and health expenditure estimates are available for both countries.

2. That is, when viewed in relative terms, government expenditures consume an 11 percent greater share of the total economy in Canada: 38.5/34.8 = 1.106, or 10.6 percent more. This method of comparing the relative impact on the total economy of various government revenue and expenditure items is used throughout this chapter.

3. The Canadian deficit appears smaller in the National Income and Product Accounts than in budgetary presentations due largely to the inclusion of pension fund revenue in the NIPA format. The difference is shown as 47 percent, rather than 50 percent, because the comparison was calculated prior to rounding.

4. Because Canada's economic output per capita is lower than that of the United States, similar per capita figures represent a higher proportion of economic output in Canada.

5. This form of presentation has been chosen because varying rules about countable income and allowable deductions make individual income taxes almost impossible to compare on any other basis. Currently, the highest marginal tax rate in Canada for *federal* income taxes is 29 percent on incomes in excess of (CAN) $55,000, compared to 28 percent (generally) in the United States (and 33 percent for a certain income range). Canadian provincial income tax rates are considerably higher than U.S. state/local rates in most cases. (Canadian local governments do not levy income taxes.) In Canada, except for Quebec, the provincial tax is calculated on exactly the same basis as the federal tax, and is phrased as a percentage of the federal tax owed, ranging from 43.5 percent in Alberta to 60 percent in Newfoundland (1986). Thus, combined federal/provincial marginal tax rates in the highest income bracket range from 41.6 percent to 46.4 percent among the English-speaking provinces. The highest (combined) marginal rate in Quebec is 51.1 percent on incomes above (CAN) $63,348 as of 1988. (William M. Mercer Limited, *1989 International Benefit Guidelines*, p.45.) Among U.S. states, the highest effective marginal rate (not including any local income tax) is 11 percent in California and D.C., yielding a combined marginal tax rate of 39 percent for most taxpayers (i.e., ignoring the 33 percent federal rate for certain income ranges). Some states have nominally higher rates, but allow federal taxes to be deducted from income, reducing the effective rate. Rates in most states are much lower.

6. Legislation currently before the Canadian Parliament would repeal the national sales tax on manufactured goods and replace it with a 7 percent national tax on all goods and services except basic food items. The new "goods and services tax" would be stated separately and collected at the point of retail sale. If enacted, which is almost certain, it would go into effect January 1, 1991. All provinces except Alberta currently levy provincial sales taxes, with rates ranging from 6 to 12 percent. These would not be automatically affected by enactment of a national sales tax. (Personal communication with the Canadian Tax Foundation, February 5, 1990.)

7. State/provincial and local spending have been combined in this comparison because published U.S. NIPA data do not separate the two levels of government.

8. Information from briefing materials supplied by J. Bruce Davis, Director, Program Administration, Health Insurance Directorate, Department of National Health and Welfare, Government of Canada.

9. Medicaid represented 10.8 percent of total state expenditures nationally in fiscal 1989. The median state spent 10.0 percent of its budget on Medicaid, with a range of 3.5 percent to 17.8 percent. (Karen A. Farrell, *State Expenditure Report 1989* (Washington: National Association of State Budget Officers), pp.13 and 61.) In fiscal 1986, states spent about 8 percent of their total general expenditures on "health and hospitals." (*Statistical Abstract of the United States, 1989,* Table 460.) This figure generally does not include Medicaid expenditures. Charges for services rendered reduce the actual outlay from general revenues, however; the estimated average net outlay is 3 percent to 4 percent of overall expenditures.

10. Government health spending other than Medicare and Medicaid includes research, construction, military and veterans health care, grants to local health centers, traditional public health programs, tax support of public hospitals, and so forth.

11. Because switching to a public health insurance system would have the most direct and immediate impact on payment for the medical services people receive directly, the estimate focuses on personal health care spending rather than total health care spending. (Total health care spending includes items other than direct medical care, such as research, construction, government public health activities and program administration. The estimate accounts separately for the last factor. It assumes no change in the total amount or the public/private spending distribution for the other factors.) On average, government spending represented 74.2 percent of total national health expenditures in Canada and 74.3 percent of personal health expenditures in 1987. (Calculation is based on Health and Welfare Canada, *National Health Expenditures in Canada 1975-1987,* Table 69.) Because the percentage varies by type of service (not all services are publicly insured), however, and because the distribution of spending across types of service differs somewhat between Canada and the United States, the estimate was done on a service-by-service basis. The result is that the average percentage of personal health care spending accounted for by government would be a bit higher if the Canadian system were applied in the U.S. context — 75.9 percent to 77.0 percent. (The Canadian data do not permit us to determine separately the government contribution to hospitals and to nursing homes. The variation in the percentage estimate for the U.S. results from making two different assumptions about that distribution.) The percentage is higher than actually observed in Canada largely because physicians' services, which are 95.7 percent publicly paid in Canada (1987), represent a higher proportion of medical costs in the United States than in Canada. Total U.S. personal health care expenditures in 1988 were $478.3 billion, of which $194.0 billion was paid by government. If the U.S. system were like the Canadian system, $363 billion to $368 billion would

have been paid by government, an increase of $169 billion to $174 billion. Adding 3 percent for administrative costs yields the quoted estimate of $174 billion to $179 billion.

12. Jack Needleman et al., "The Health Care Financing System and the Uninsured" (Washington: Lewin/ICF), April 4, 1990, Table 15, p.60. This estimate of the likely additional costs from insuring the uninsured is very conservative, because it assumes no increase in payments for the many services the uninsured already receive. (On a per capita basis, health spending on the uninsured is about 60 percent as great as spending on the insured. *Ibid.*, p.56.) In a sense, this is a good proxy for proposals to expand coverage using a Canadian model. For example, hospital budgets already reflect the uncompensated care they provide to the uninsured. If U.S. hospitals were put on global budgets as Canadian hospitals are, they would not need an increased budget for the "free" care they already provide; but the additional care that people would seek because of becoming insured would have to be paid for. On the other hand, the specific benefit package Lewin/ICF modelled included a $200 deductible and 20 percent coinsurance. Completely "free" care, as in Canada, might induce somewhat larger total expenditures, but the difference is likely to be very small.

13. See note 11 above. The Lewin/ICF estimate was prepared by type of service. We applied the percent of public financing observed in Canada to the Lewin/ICF estimate for each service type. Because Lewin/ICF estimated the bulk of the increase would be in hospital and physician services, which are almost entirely publicly financed in Canada, the average percent paid by the public program is higher than the 74 percent to 77 percent noted earlier.

14. D.U. Himmelstein, M.D., and S. Woolhandler, M.D., M.P.H., "[Sounding Board] Cost Without Benefit: Administrative Waste in U.S. Health Care," *The New England Journal of Medicine* 314:7 (February 13, 1986), pp.441-445.

15. *Ibid.*

16. Gaining the consensus necessary to pass Medicare in 1965 required promising hospitals full payment of their reasonable costs and physicians payment of customary and prevailing charges. More generally, Canada experienced high annual cost increases during the late 1960s when universal medical insurance was being implemented. Schieber and Poullier (*op.cit.*) point out that six of seven industrialized nations experienced high growth rates in real health expenditures per capita during the 1960s, when most of these countries were expanding their systems of publicly financed care.

17. The potential impact on state budgets of a Canadian-style system suggested here is borne out by an analysis prepared for the Michigan Governor's Task Force on Access to Health Care. That Task Force considered various

proposals for improving access to health care in Michigan, including adoption of a Canadian-style public insurance model. Although no proposal was endorsed by the Task Force, detailed estimates of the Canadian model were prepared. According to these estimates, a public insurance program would have added $6.8 billion to an estimated $12.2 billion state budget in 1990 — a 56 percent increase. (Academic Consortium of Michigan, "Michigan Health Plan: Universal Health Security," Report to the Governor's Task Force on Access to Health Care, September 1, 1989.)

Because state government revenues per capita in Michigan are currently 11 percent higher than the national average, this estimate of a 56 percent expenditure increase in Michigan is comparable to our estimate of a 71 percent increase in a more typical state. (1.11 x 1.56 = 1.73) Service coverage under the proposed "Michigan Health Plan" would have been somewhat broader than coverage in most Canadian provinces currently, although copayments would have been permitted for some services.

18. Health and Welfare Canada, *National Health Expenditures in Canada 1975-1987*, Table 80. U.S. Health Care Financing Administration, Office of National Cost Estimates, 1988 national health expenditure estimates for the United States released May 3, 1990, by the U.S. Department of Health and Human Services. calculation is based on Table 3 of the press release.

Chapter 6

1. The most obvious examples pertain to the prospective payment system for hospitals under Medicare. Under this system, begun in 1983, payments to hospitals moved over a period of several years from rates based on individual hospitals' past experience to rates based on overall national experience. In 1986, Congress enacted a one-year "pause" in this phased transition. Hospitals in several states would have benefitted from a faster transition to national rates, but Congress exempted hospitals in only one state from the delay, allowing them the benefit of national rates immediately. A Senator from that state played a key role in the Senate Finance Committee, which has purview over Medicare, at that time. Other examples pertain to the classification of hospitals as "urban" or "rural" under the prospective payment system. Rural hospitals are paid less. The payment differential has led to congressionally directed changes in the classification rules, usually benefiting one or a few hospitals in an individual Member's district.

2. There are 204 public general hospitals in Ontario, according to the *Canadian Hospital Directory 1988*, Table 1, p.202. California has 474 community hospitals according to the 1987 edition of the American Hospital Association's *Hospital Statistics*, Table 5C, p.48. Both figures would be larger if specialty and long-term hospitals were included.

Appendix 1

Canadian Media Reports on Access Issues

Chapter 4 quotes several press reports dealing with specific health care access problems in Canada. This appendix presents additional reports from the Canadian press and radio on the same topics.

Specific complaints about lack of access in Canada include:

- Long waits for certain surgical and diagnostic procedures.

  There are currently over 1,600 people in Ontario waiting for heart surgery and the list is steadily increasing. . . . [A] total of 6,400 heart operations are performed each year in this province. . . . [T]here are currently 257 people on [Victoria H]ospital's waiting list. [A spokesman] said the wait ranges from 24 hours for emergency surgery to 16 months for elective surgery. (*The St. Thomas, Ontario, Times Journal*, April 28, 1989.)

  Waits of several weeks or months for diagnostic procedures such as CAT scans and mammograms are becoming the norm, while the operating room queue for required but not urgent or emergency surgery (such as cataract repair, hip replacement and even heart bypasses) is equally long. . . . Thousands of Alberta, Saskatchewan and B.C. residents, fed up with the long lines for cataract repair, are avoiding the crush and having their surgery done in the high-rise suite of offices of Dr. Howard Gimbel [in Calgary]. . . . The patient . . . must pay an administrative fee of $900 which is not covered by medicare. (*The Globe and Mail*, Toronto, May 28, 1988.)

  Princess Margaret Hospital has announced it won't accept new cancer patients requiring radiation treatment for a six-week period starting Sept. 30 to clear up a 300-patient backlog. . . . A severe shortage of technicians forced [the cut]. (*The Toronto Sun*, September 14, 1989.)

The only hospital doing cardiovascular surgery in northern Alberta . . . now has 210 adults and children on its waiting list. The average wait is six months, although some people have been waiting as long as a year, said [a] hospital spokesman. (*The Edmonton Journal*, January 6, 1990.)

- Temporary closure of hospital beds to remain within budget, even though the beds are needed for patients on waiting lists.

Doctors and nurses at Brandon General Hospital lashed out yesterday at bed closings that have left 91 patients, including cancer victims, waiting up to 6 weeks for urgent surgery. . . . Most of the patients have cancer of the breast, large bowel, or lungs, [chief of staff Dr. Michael] Taylor said. . . . Brandon General closed 68 medical, surgical and intensive-care unit beds in June for three months in a bid to balance its $37-million budget this year, hospital officials said. The same number of beds have been shut down each summer since 1987, but this year doctors and nurses are ready to throw in their scalpels and caps in frustration, Taylor said. . . . He blamed the funding woes and bed closings on a Health Department policy introduced by the former NDP government that forbids deficit-financing and forces hospitals to balance their annual budgets. (*The Winnipeg Free Press*, July 5, 1989.)

[Newfoundland Health Minister Chris Decker] told the [budget estimates] committee at the House of Assembly more than 400 hospital beds will be closed in the province this summer. Mr. Decker said the number of closures this summer, 405, has decreased from 433 last year. . . . He said the problem is unless the government can get back on the road of economic recovery there will be no money to provide health care services. (*The St. John's Evening Telegram*, June 28, 1989.)

(Note: This represents about one-eighth of all beds in public general hospitals in Newfoundland, according to the 1988 *Canadian Hospital Directory*.)

. . . [Kitchener-Waterloo] Hospital will be closing at least 43 beds, laying off or cutting back the hours of at least 70 staff members, capping the hemodialysis program and discontinuing lens implant procedures at the hospital. . . . [T]o eliminate a deficit of nearly $3 million . . . 360 eye surgery patients will now have to be added to the already strained load at St. Mary's Hospital, where 740 procedures were performed in the last year. . . . Cutting the program at K-W Hospital will increase waiting periods [at St. Mary's] 25 per cent, to between six and 18 months. (*The Kitchener-Waterloo, Ontario, Record*, April 25, 1989.)

- Overcrowded emergency rooms and inability to admit patients in need of emergency care, due to overcrowding.

[Interviewer]: . . . [A]re you saying to me that someone that you were transporting maybe died because the hospital was CCB ["Critical Care Bypass," i.e., closed to all new patients, even emergencies]?

[Ambulance] Crew Member #1: The hospital was RDC ["Redirect Consideration," i.e., open only to life-threatening emergencies], and at the time we transported him, he was serious but not life-threatening in our best judgment. So what we did is we had to transport him to a further medical facility, because the hospitals around were RDC and CCB. So the closest hospital was closed to that patient. The second closest hospital would not take him because he wasn't in our best opinion life-threatening. He was an emergency patient though. So we transported him further and enroute to that other hospital he became life-threatening, but now we were close enough to that other hospital that there were no other hospitals that we could redirect to. We had to take him to the one we were already heading to.

[Interviewer]: What happened to him?

Crew Member #1: The gentleman arrested in the hospital just as we arrived. (Transcript of Canadian Broadcasting Company radio show, "As It Happens," January 25, 1989.)

Appendix 2

Data and Sources

United States

Year	Gross National Product (current U.S.$ in billions)	Total Population (000s)	Total National Health Expenditures (current U.S.$ in billions)	Implicit Price Deflator for GNP (1982 = 100.0)	Implicit Price Deflator for GNP (1981= 100.0) (calculated from 1982)
1960	515.3	180,671	27.1	30.9	32.9
1961	533.8	183,691	29.1	31.2	33.2
1962	574.6	186,538	31.6	31.9	34.0
1963	606.9	189,242	34.4	32.4	34.5
1964	649.8	191,889	38.0	32.9	35.0
1965	705.1	194,303	41.6	33.8	35.9
1966	772.0	196,560	45.9	35.0	37.2
1967	816.4	198,712	51.7	35.9	38.3
1968	892.7	200,706	58.5	37.7	40.2
1969	963.9	202,677	65.7	39.8	42.3
1970	1015.5	205,052	74.4	42.0	44.7
1971	1102.7	207,661	82.3	44.4	47.2
1972	1212.8	209,896	92.3	46.5	49.5
1973	1359.3	211,909	102.5	49.5	52.7
1974	1472.8	213,854	116.1	54.0	57.4
1975	1598.4	215,973	132.9	59.3	63.1
1976	1782.8	218,035	152.2	63.1	67.1

Appendix 2 *(cont'd)*

Data and Sources

United States

Year	Gross National Product (current U.S.$ in billions)	Total Population (000s)	Total National Health Expenditures (current U.S.$ in billions)	Implicit Price Deflator for GNP (1982 = 100.0)	Implicit Price Deflator for GNP (1981= 100.0) (calculated from 1982)
1977	1990.5	220,239	172.0	67.3	71.6
1978	2249.7	222,585	193.4	72.2	76.9
1979	2508.2	225,055	216.6	78.6	83.6
1980	2732.0	227,757	249.1	85.7	91.2
1981	3052.6	230,138	288.6	94.0	100.0
1982	3166.0	232,520	323.8	100.0	106.4
1983	3405.7	234,799	356.1	103.9	110.5
1984	3772.2	237,001	387.0	107.7	114.7
1985	4014.9	239,279	420.1	110.9	118.1
1986	4231.6	241,625	450.5	113.8	121.1
1987	4524.3	243,934	488.8	117.4	124.9
1988	4880.6	246,329	539.9	121.3	129.1

Sources: U.S. Dept of Commerce, Bureau of Economic Analysis, *Survey of Current Business* 69:9 (September 1989), Tables 1 and 3, pp. 53 and 57.
U.S. Dept of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1989* (109th ed.), (Table) No. 2. Population: 1900 to 1988.
U.S. Dept of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 1045 (January 1990), Table D.
Office of National Cost Estimates, U.S. Health Care Financing Administration, revised national health expenditure series through 1988. DHHS Press Release May 3, 1990, and personal communication.

Appendix 2 *(cont'd)*

Data and Sources

Canada

Year	Gross National Product (current CAN $ in millions)	Total Population (000s)	Total National Health Expenditures (current CAN $ in millions)	Implicit Price Deflator for GDP (1981 = 100.0)	OECD Purchasing Power Parity Currency Conversion Factor
1960	38,832	17,909.0	2,141.7	29.7	1.02
1961	40,164	18,271.0	2,375.5	29.9	1.03
1962	43,637	18,614.0	2,561.4	30.3	1.02
1963	46,830	18,964.0	2,801.5	30.9	1.03
1964	51,283	19,325.0	3,059.9	31.7	1.04
1965	56,531	19,678.0	3,415.5	32.8	1.05
1966	63,268	20,048.0	3,837.5	34.4	1.06
1967	67,824	20,412.0	4,324.4	35.8	1.07
1968	74,197	20,729.0	4,911.9	37.1	1.06
1969	81,819	21,028.0	5,505.3	38.8	1.05
1970	87,765	21,324.0	6,253.8	40.6	1.04
1971	95,784	21,591.7	7,118.7	41.9	1.02
1972	107,168	21,821.7	7,787.7	44.3	1.04
1973	125,642	22,072.3	8,699.4	48.2	1.06
1974	149,873	22,395.4	10,223.9	55.1	1.11
1975	169,002	22,726.9	12,267.8	60.6	1.11
1976	194,388	23,017.9	14,119.9	65.8	1.13

Appendix 2 *(cont'd)*

Data and Sources

Canada

Year	Gross National Product (current CAN $ in millions)	Total Population (000s)	Total National Health Expenditures (current CAN $ in millions)	Implicit Price Deflator for GDP (1981 = 100.0)	OECD Purchasing Power Parity Currency Conversion Factor
1977	213,308	23,295.0	15,500.0	69.9	1.13
1978	235,654	23,534.6	17,248.0	74.2	1.12
1979	268,941	23,768.3	19,412.1	81.6	1.13
1980	302,064	24,070.1	22,703.9	90.2	1.15
1981	344,657	24,362.1	26,650.0	100.0	1.18
1982	361,772	24,603.5	31,150.2	108.7	1.20
1983	394,114	24,803.3	34,511.5	114.1	1.22
1984	431,249	24,995.1	37,310.3	117.7	1.22
1985	463,656	25,181.3	40,407.9	120.7	1.22
1986	488,083	25,372.9	44,285.7	123.6	1.22
1987	533,812	25,643.9	47,934.8	129.1	1.23

Sources: Statistics Canada, *National Income and Expenditure Accounts: Annual estimates 1926-1986* (Ottawa: Minister of Supply and Services Canada), Tables 4 and 7.

Statistics Canada, *National Income and Expenditure Accounts: Annual estimates 1977-1988* (Ottawa: Minister of Supply and Services Canada, 1989), Tables 4 and 7.

Health and Welfare Canada, *National Health Expenditures in Canada 1975-87* (Ottawa: Minister of Supply and Services Canada, forthcoming), Table 1. Final tables prepared for inclusion in this publication were supplied by the Health Information Division, Health and Welfare Canada. The 1987 figure is provisional.

J-P. Poullier, "Health Care Expenditure and Other Data: An International Compendium from the Organization for Economic Cooperation and Development," *Health Care Financing Review* (1989 Annual Supplement), Table 67, p.194.

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R190